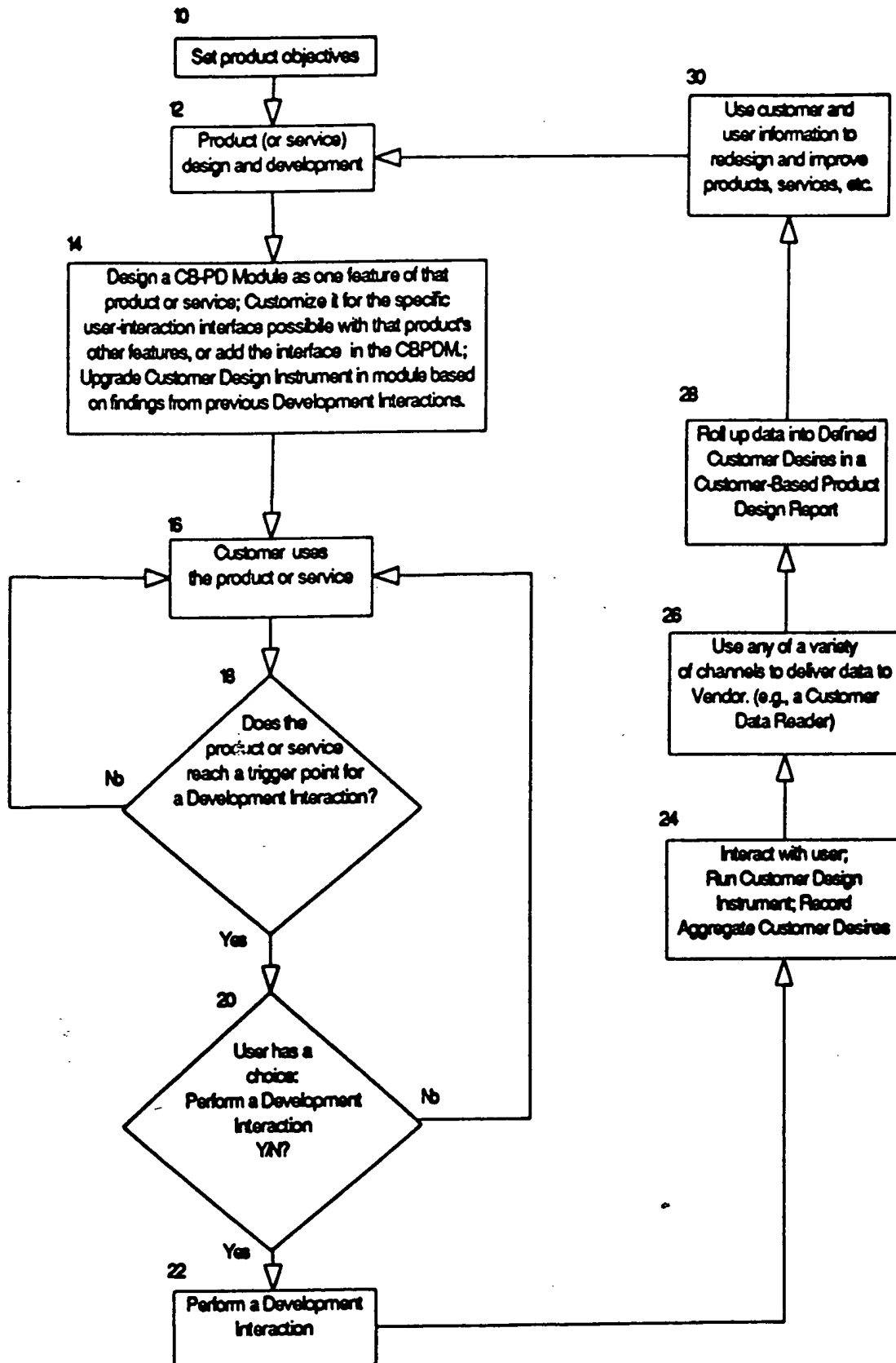
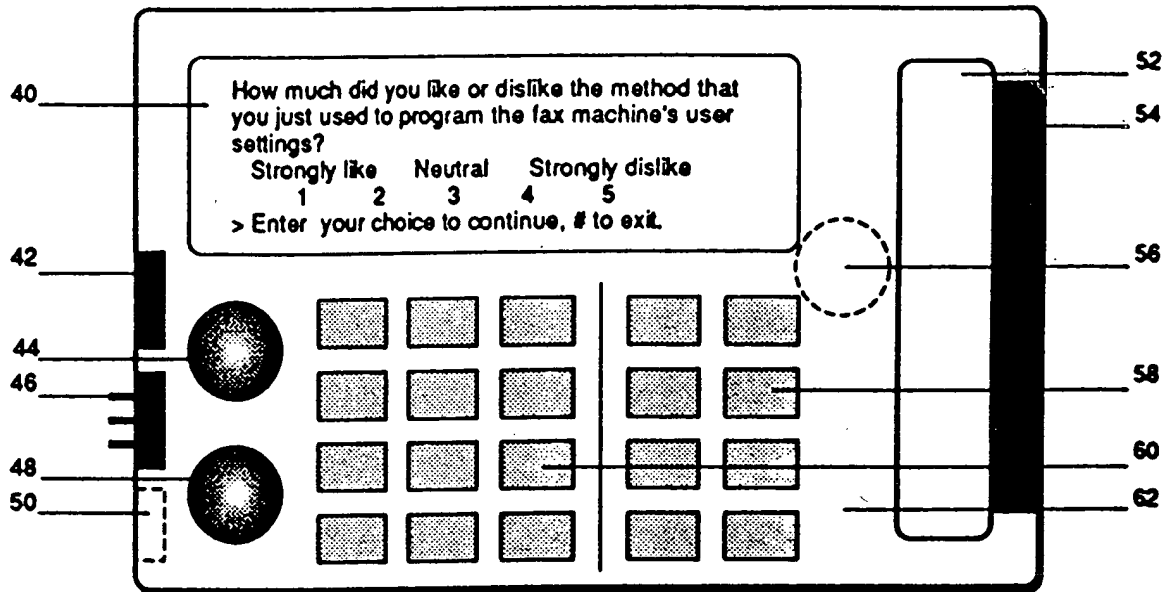


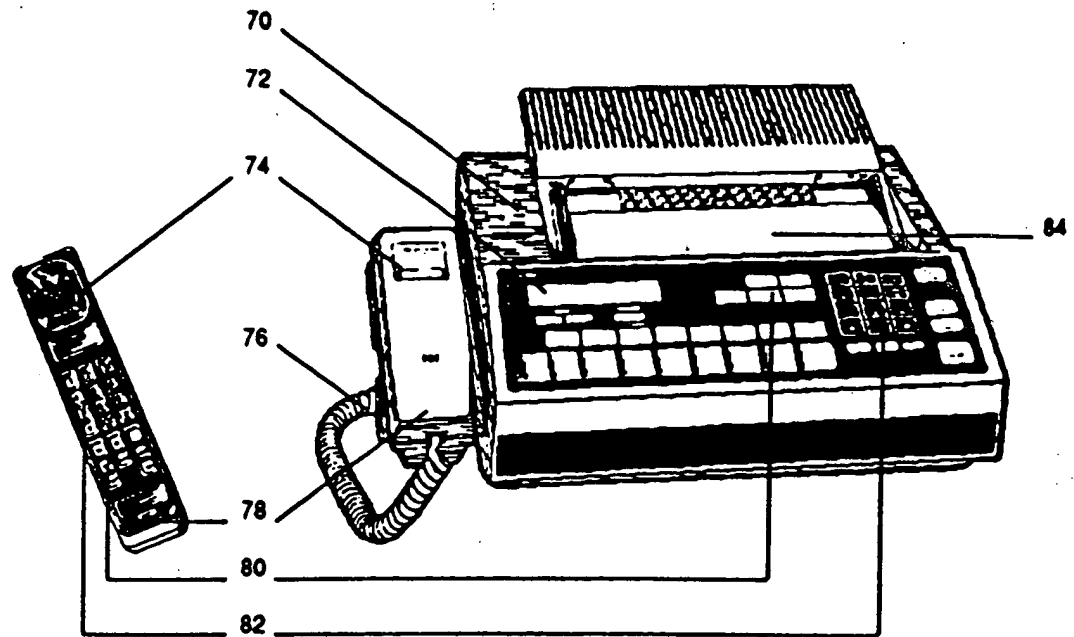
Figure 1: The Customer Design System (CDS)



**Figure 2: Customer-Based Product Design Module (CB-PDM)**

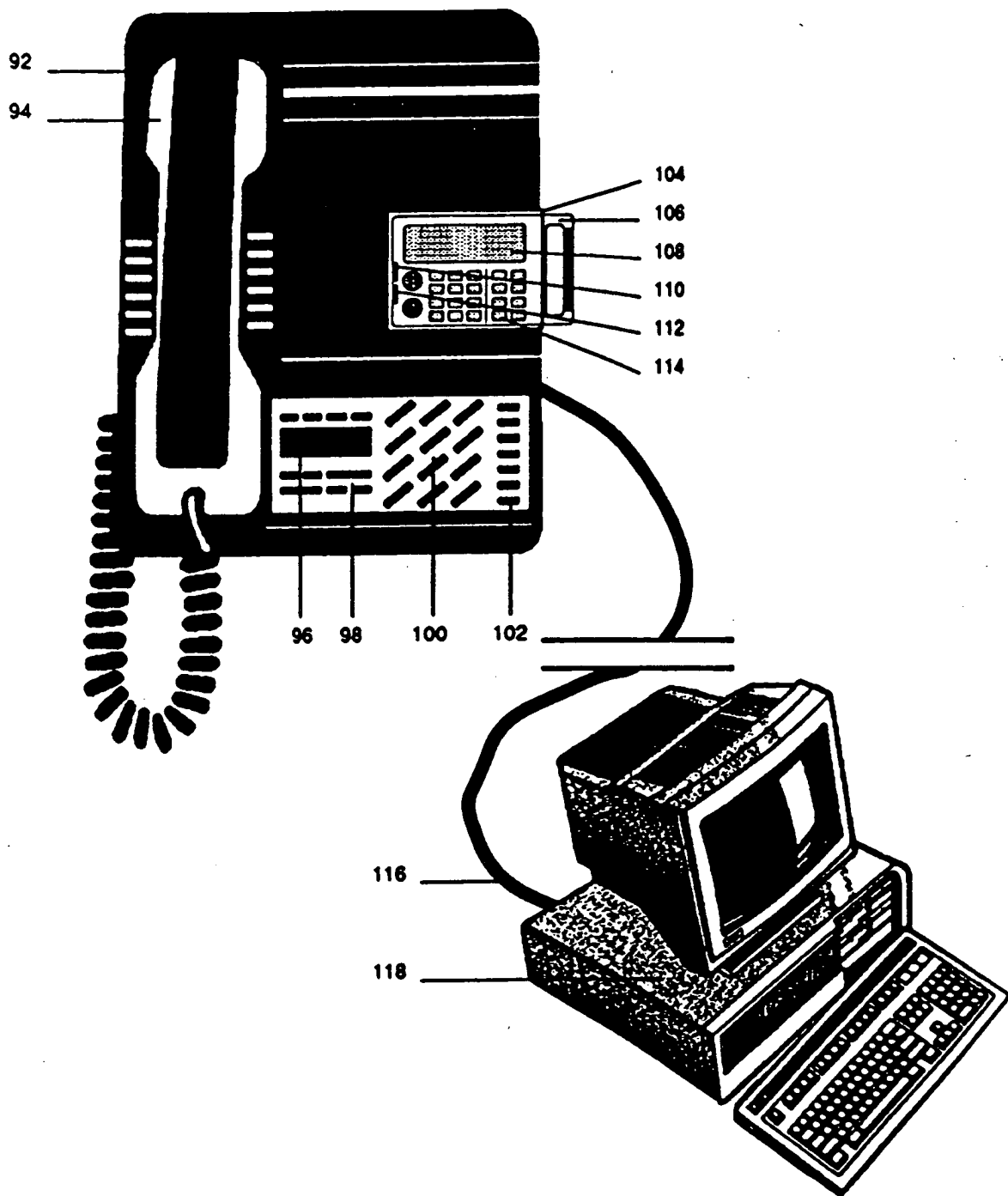


**Figure 3: Customer Directed Product (CDP)**



56 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

**Figure 4: Customer Data Reader/Programmer (CDRP)**



**Figure 5: Transmitting ACD data to Vendor  
directly from a CB-PD Module**

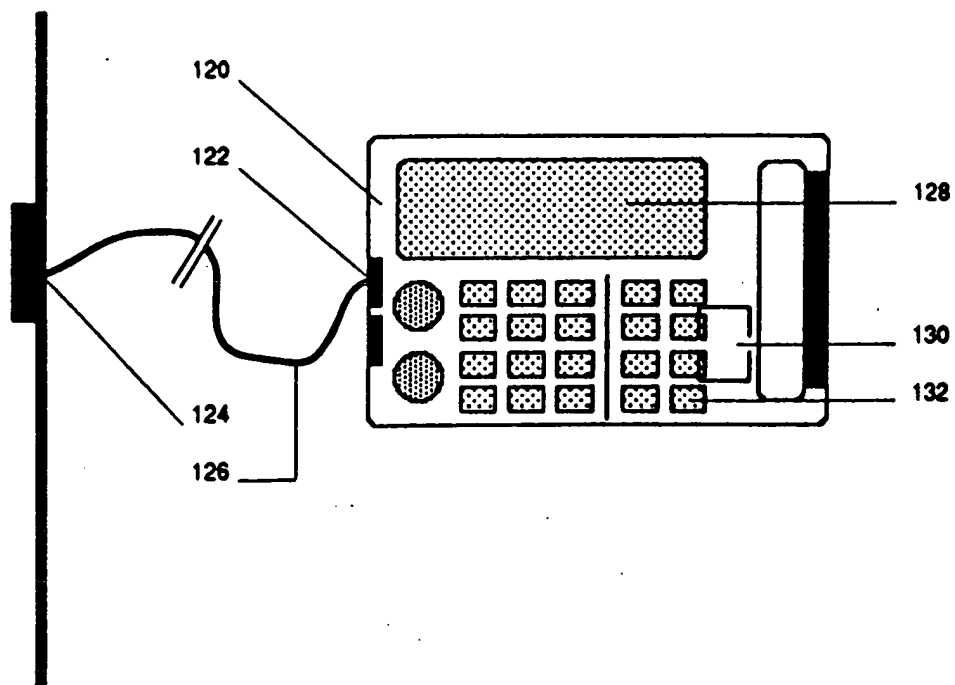
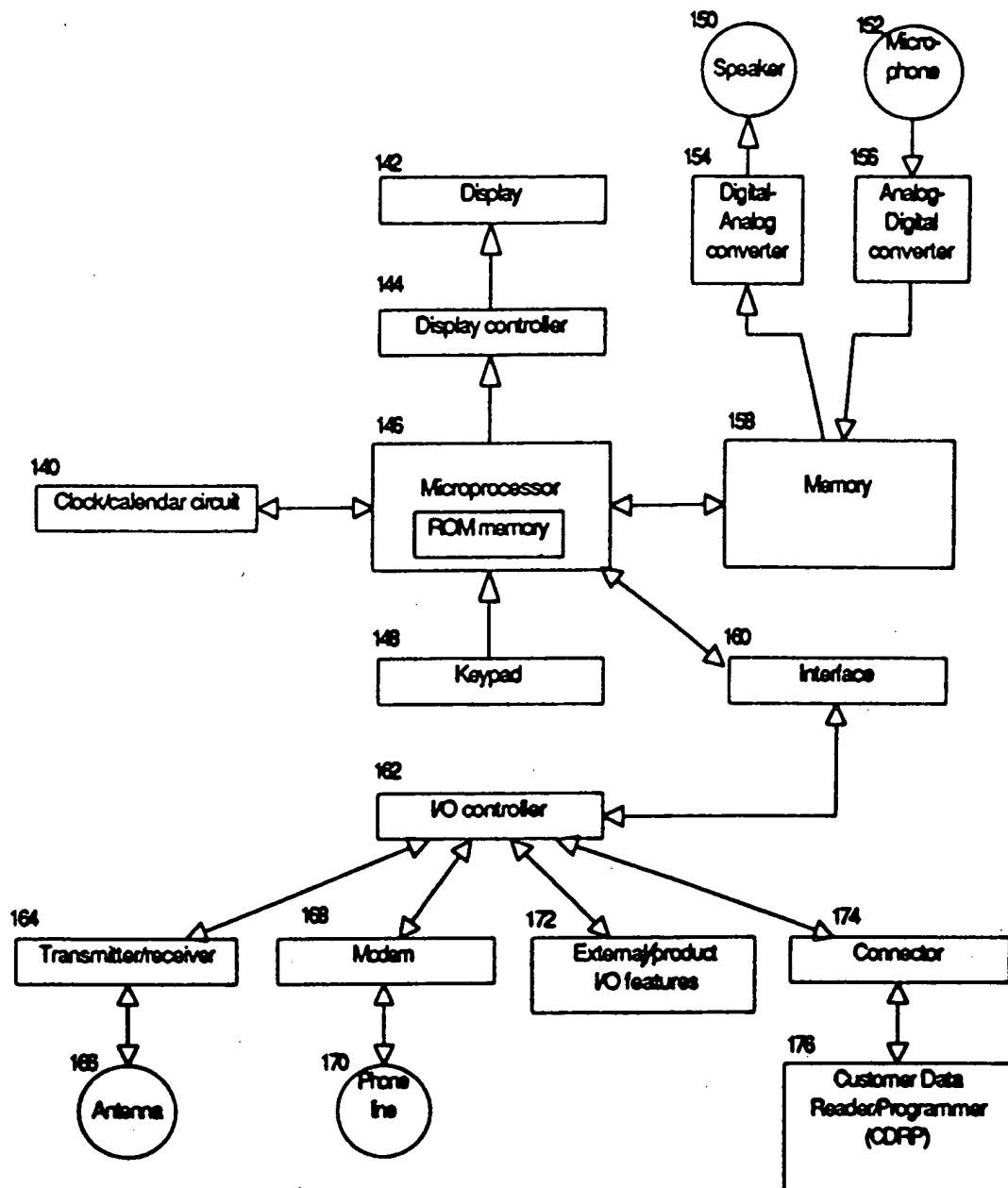


Figure 6: Block diagram of CB-PD Module



**Figure 7: Block diagram of Customer Directed Product (CDP)**

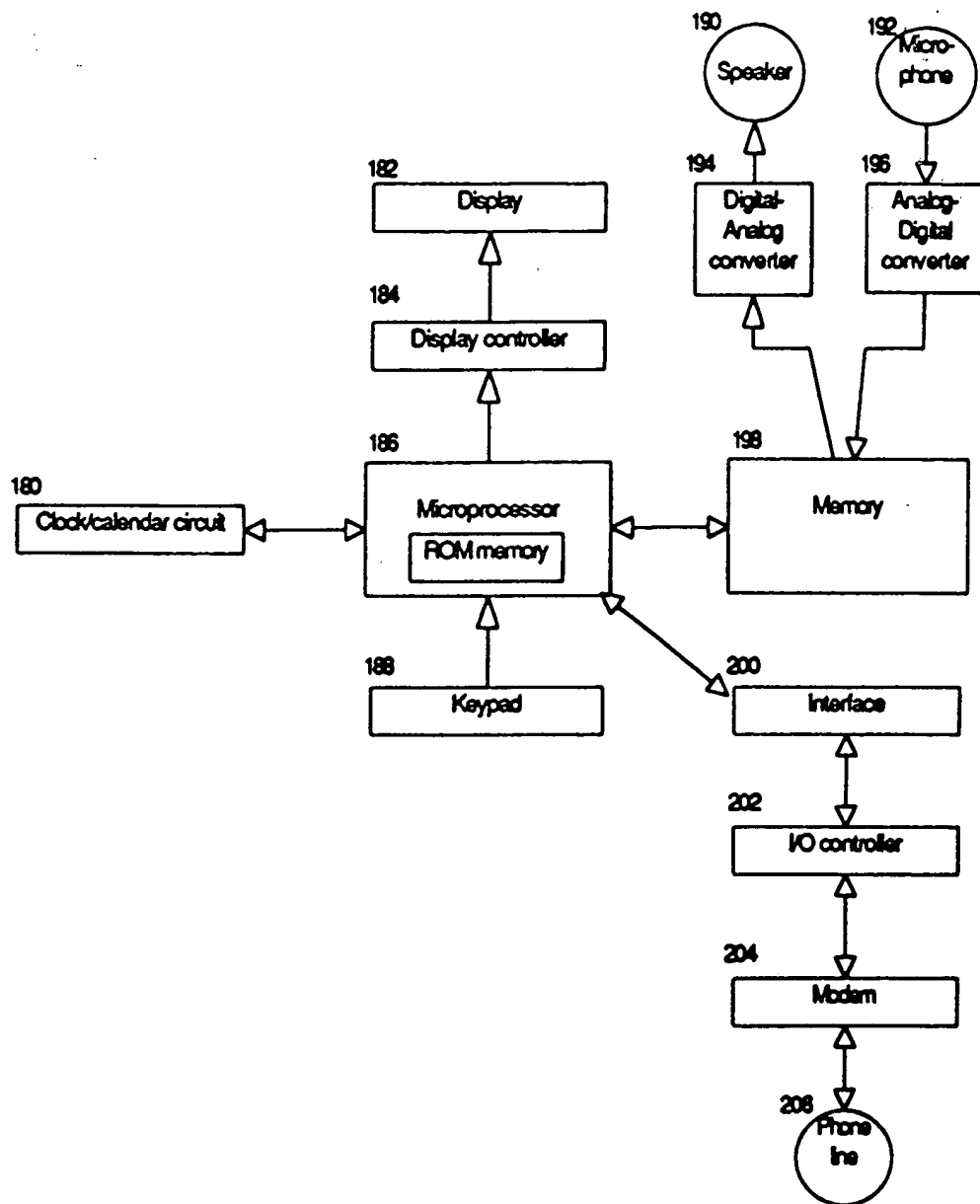


Figure 8: Instrument Design Repository (IDR)

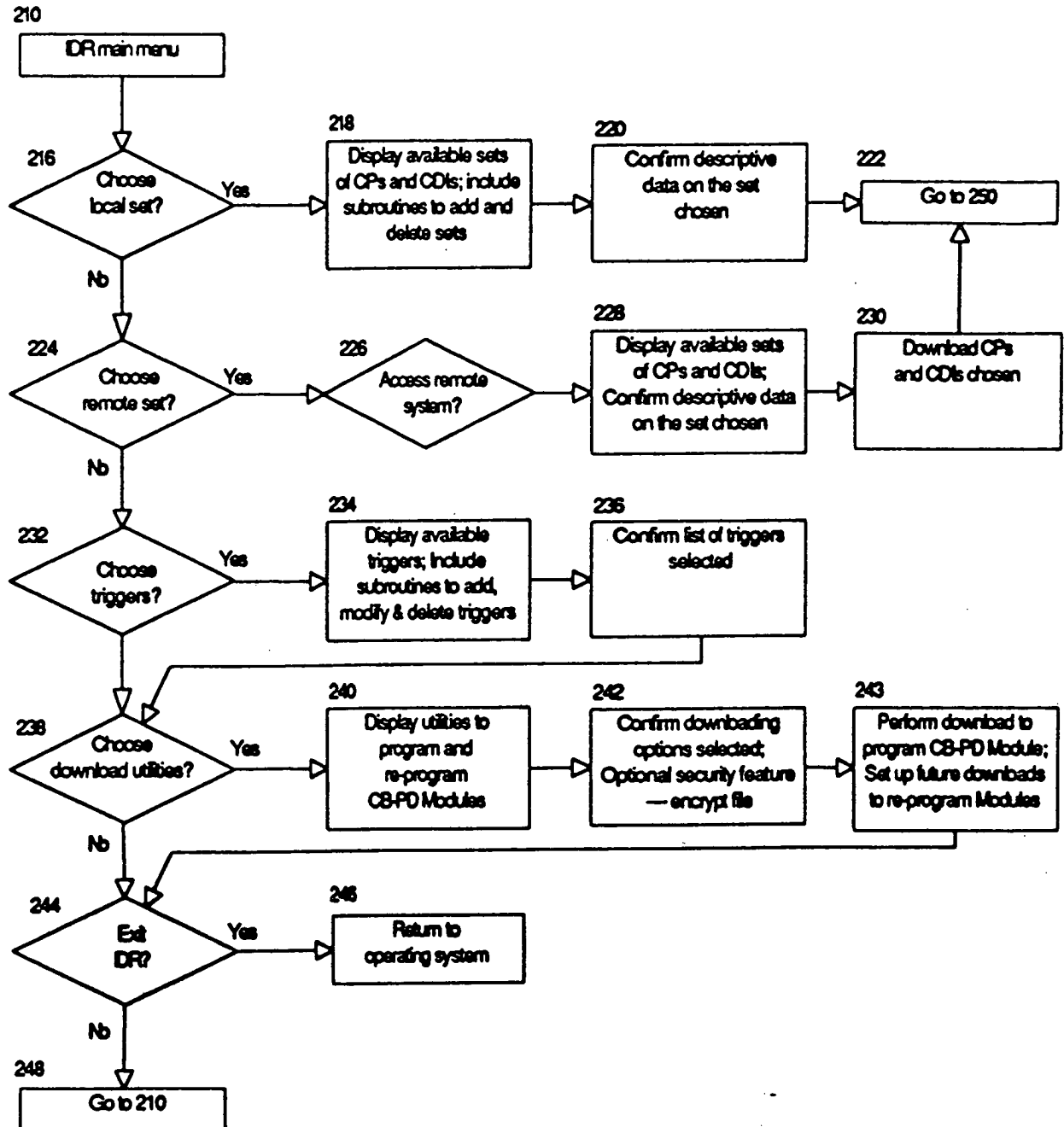
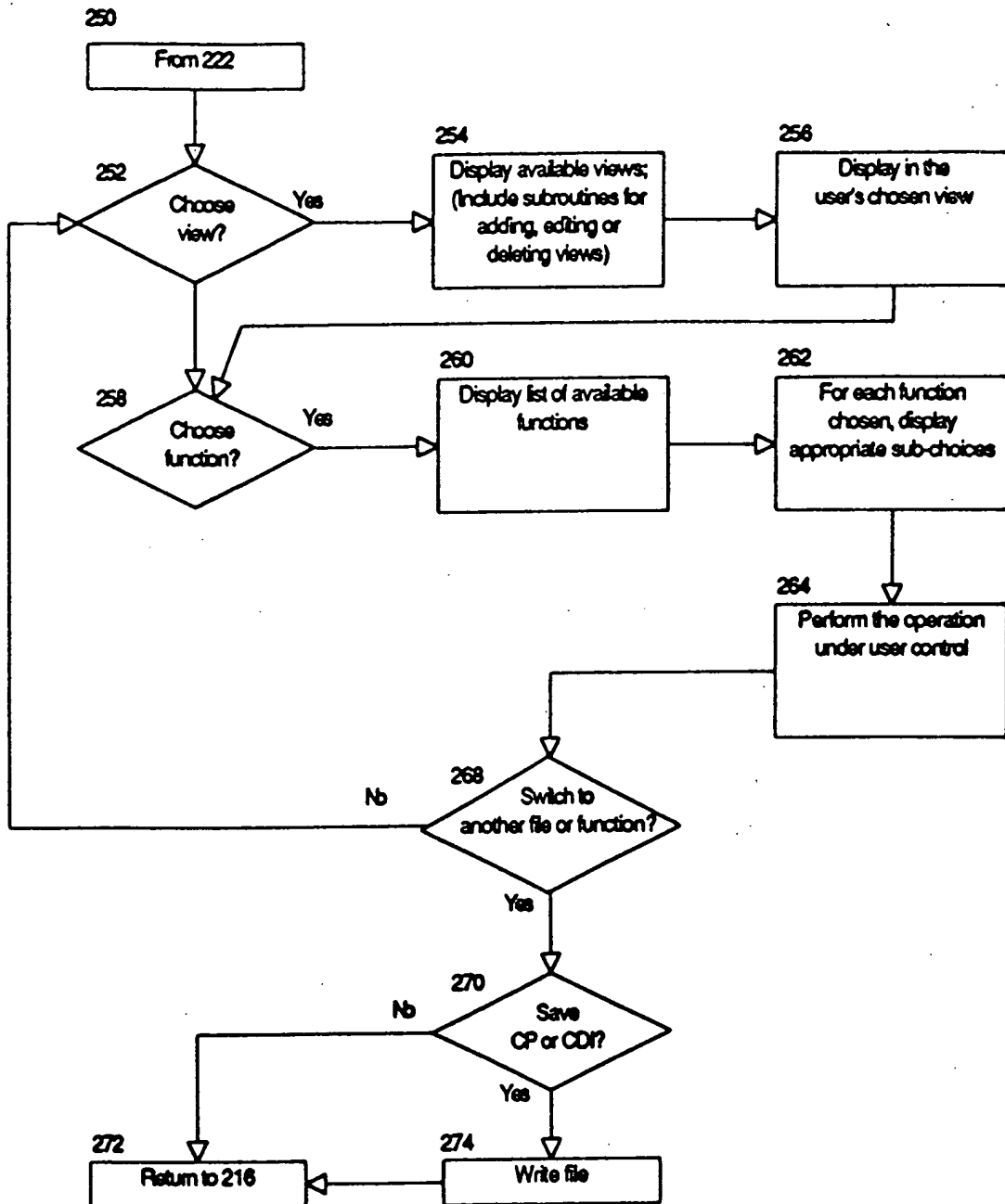




Figure 9: Instrument Design Repository (IDR)



1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
2051	2052	2053	2054	2055	2056	2057	2058	2059	2060
2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
2071	2072	2073	2074	2075	2076	2077	2078	2079	2080
2081	2082	2083	2084	2085	2086	2087	2088	2089	2090
2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
2101	2102	2103	2104	2105	2106	2107	2108	2109	2110
2111	2112	2113	2114	2115	2116	2117	2118	2119	2120
2121	2122	2123	2124	2125	2126	2127	2128	2129	2130
2131	2132	2133	2134	2135	2136	2137	2138	2139	2140
2141	2142	2143	2144	2145	2146	2147	2148	2149	2150
2151	2152	2153	2154	2155	2156	2157	2158	2159	2160
2161	2162	2163	2164	2165	2166	2167	2168	2169	2170
2171	2172	2173	2174	2175	2176	2177	2178	2179	2180
2181	2182	2183	2184	2185	2186	2187	2188	2189	2190
2191	2192	2193	2194	2195	2196	2197	2198	2199	2200
2201	2202	2203	2204	2205	2206	2207	2208	2209	2210
2211	2212	2213	2214	2215	2216	2217	2218	2219	2220
2221	2222	2223	2224	2225	2226	2227	2228	2229	2230
2231	2232	2233	2234	2235	2236	2237	2238	2239	2240
2241	2242	2243	2244	2245	2246	2247	2248	2249	2250
2251	2252	2253	2254	2255	2256	2257	2258	2259	2260
2261	2262	2263	2264	2265	2266	2267	2268	2269	2270
2271	2272	2273	2274	2275	2276	2277	2278	2279	2280
2281	2282	2283	2284	2285	2286	2287	2288	2289	2290
2291	2292	2293	2294	2295	2296	2297	2298	2299	2300
2301	2302	2303	2304	2305	2306	2307	2308	2309	2310
2311	2312	2313	2314	2315	2316	2317	2318	2319	2320
2321	2322	2323	2324	2325	2326	2327	2328	2329	2330
2331	2332	2333	2334	2335	2336	2337	2338	2339	2340
2341	2342	2343	2344	2345	2346	2347	2348	2349	2350
2351	2352	2353	2354	2355	2356	2357	2358	2359	2360
2361	2362	2363	2364	2365	2366	2367	2368	2369	2370
2371	2372	2373	2374	2375	2376	2377	2378	2379	2380
2381	2382	2383	2384	2385	2386	2387	2388	2389	2390
2391	2392	2393	2394	2395	2396	2397	2398	2399	2400
2									

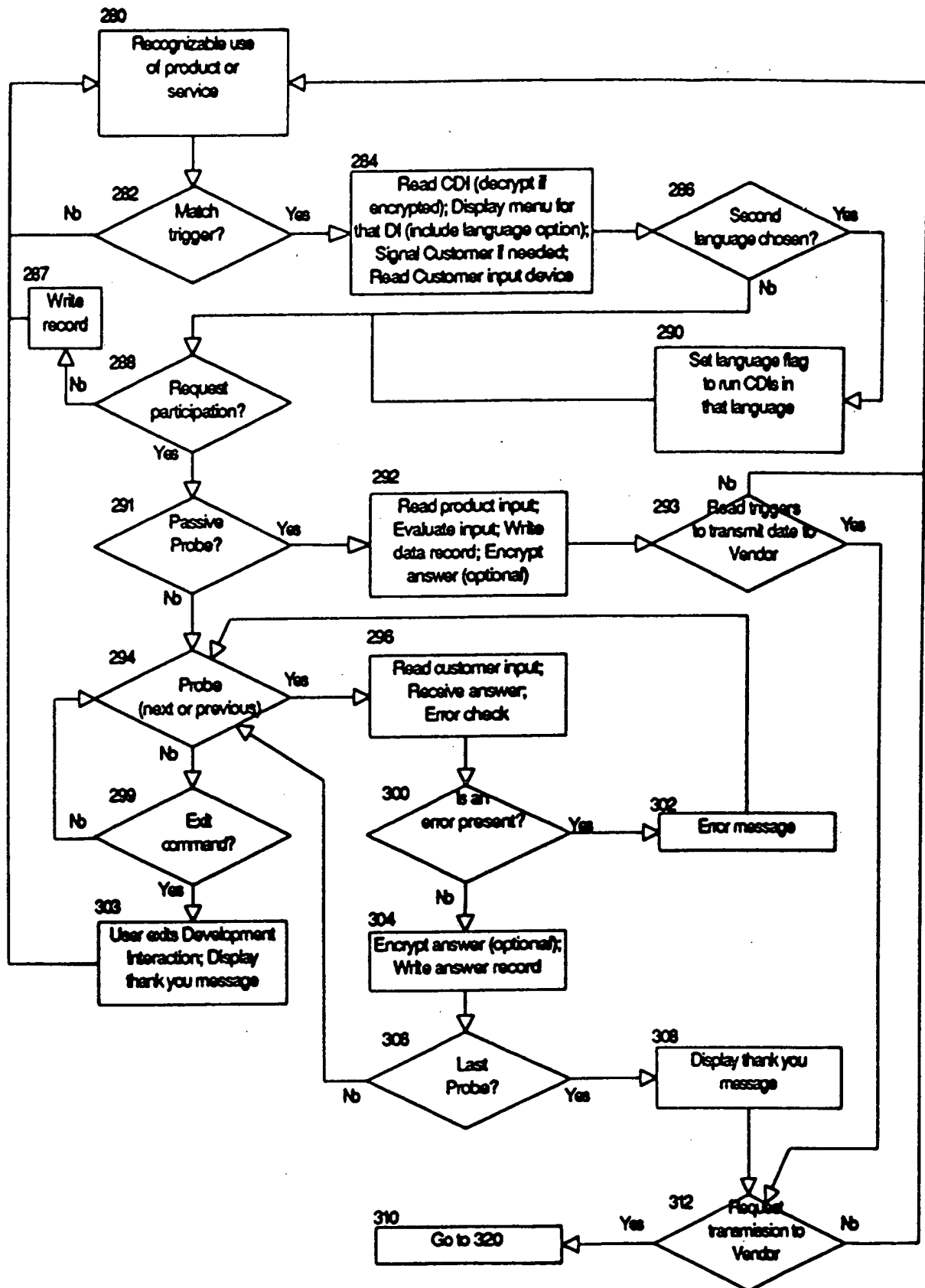
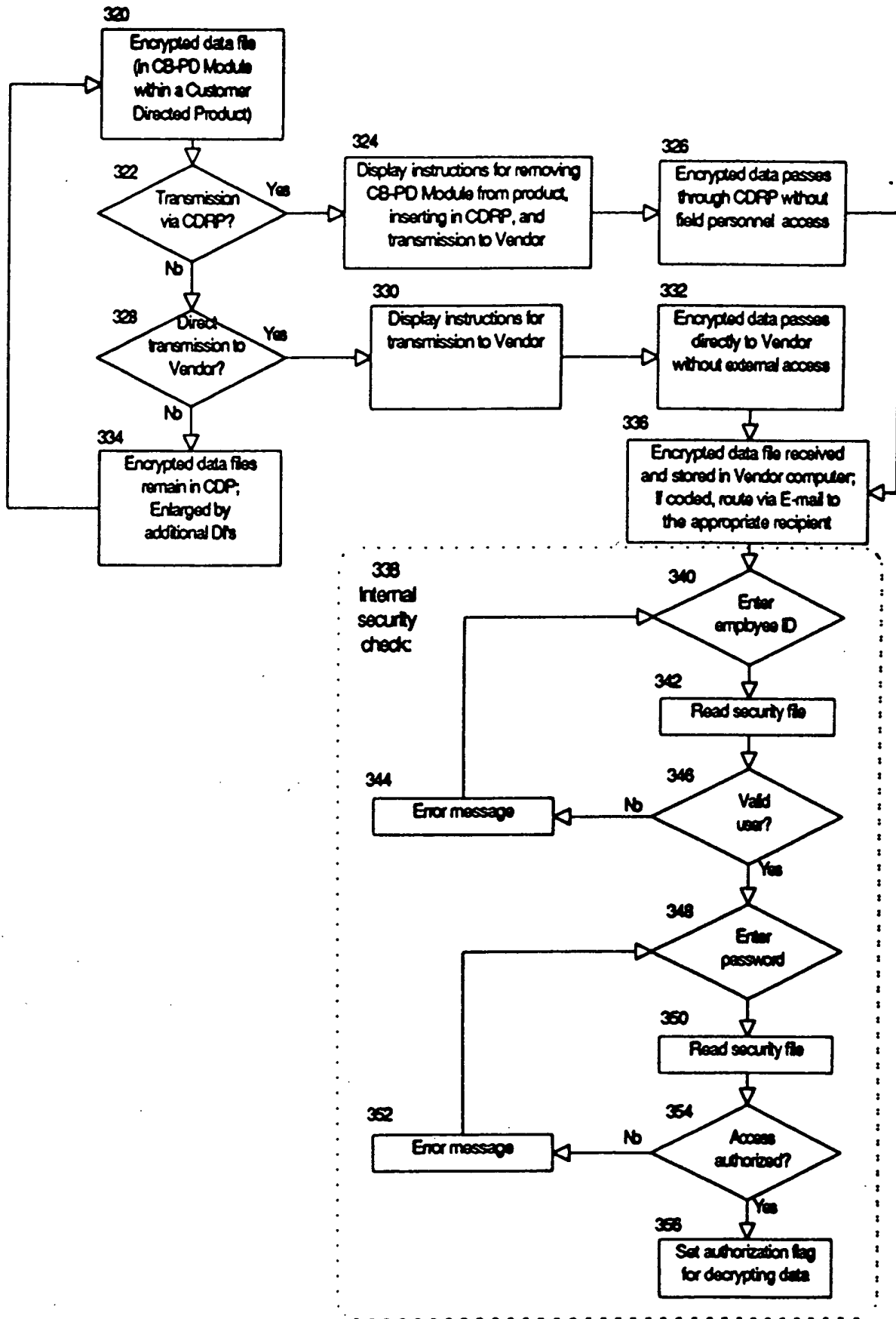
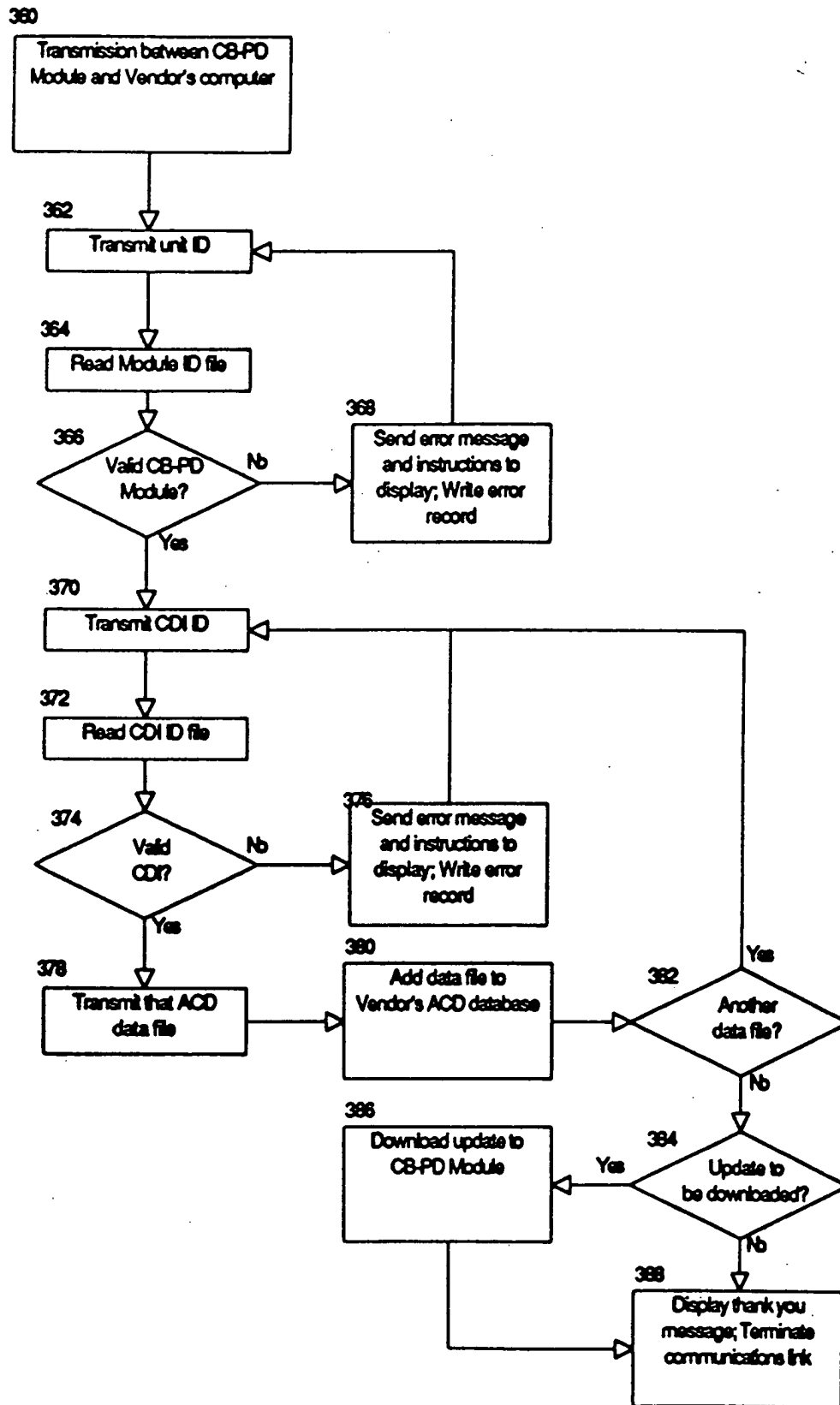


Figure 11: Transmission with Optional Security Procedures

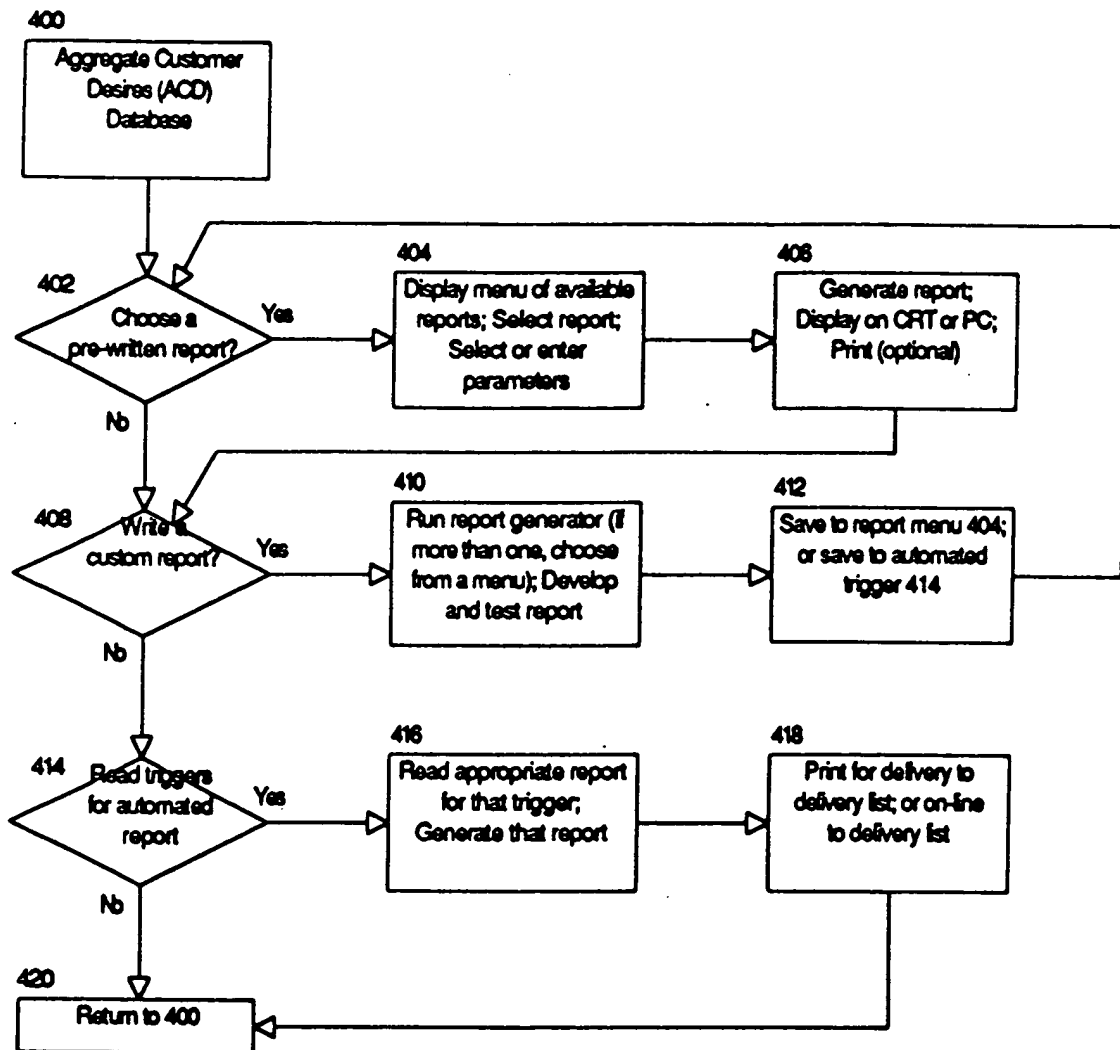


**Figure 12: Growth of  
Aggregate Customer Desires (ACD) Database**



65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Figure 13: Customer-Based Product Design Report (CB-PDR)

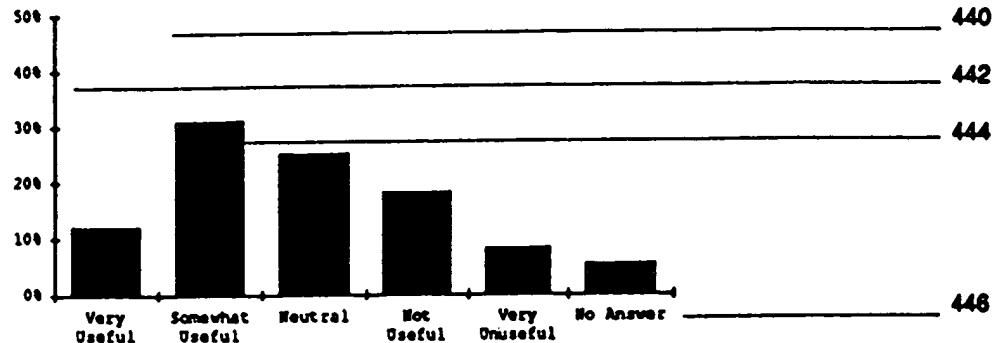


**Figure 14: Recommended reporting format for Customer-Based Product Design Reports (CB-PDR)**

Probe #12: Function to calculate Net Present Value \_\_\_\_\_ 430

How useful did you find this method of performing this type \_\_\_\_\_ 432  
of calculation?

Very Useful	12%	423	_____ 434
Somewhat Useful	31%	1,086	_____ 436
Neutral	25%	884	_____ 438
Not Useful	18%	642	_____ 438
Very Unuseful	8%	287	
No Answer	5%	191	



Customer comments: \_\_\_\_\_ 448

Please explain how this calculation method helped or hindered \_\_\_\_\_ 450  
your work:

- 1 Gives a good understanding of the interaction between \_\_\_\_\_ 452  
different financial measures
- 1 I could experiment with the variables
- 2 This is easy to understand
- 2 Gave me a better understanding of the numbers
- 2 It focused on the key elements so I could think about the  
sensitivity points
- 3 Somehow the method and my numbers were not related. Although  
I spent time on it, it didn't help my decision.
- 3 Too easy to miss the big picture because of data overload.  
Too many numbers to manipulate.
- 4 There seemed to be more than was necessary.
- 4 Should be more instructive.
- 5 Help!

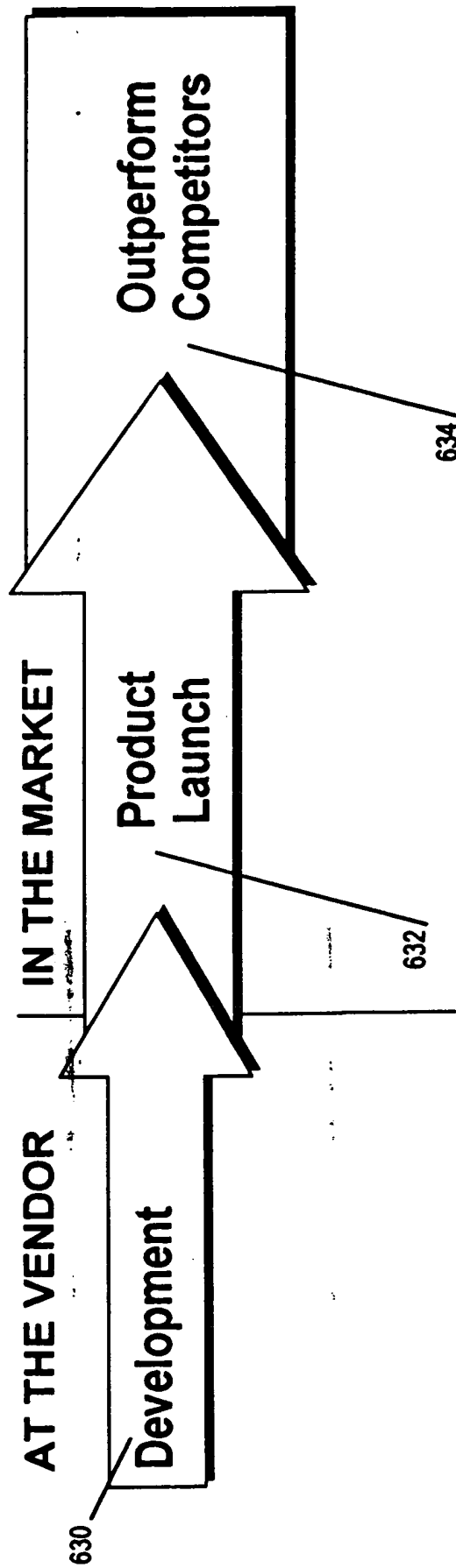
No Answer Can see consequences of different assumptions \_\_\_\_\_ 454  
No Answer Helped understanding but took too many tries

663333 6333660

Figure 15



## Figure 16

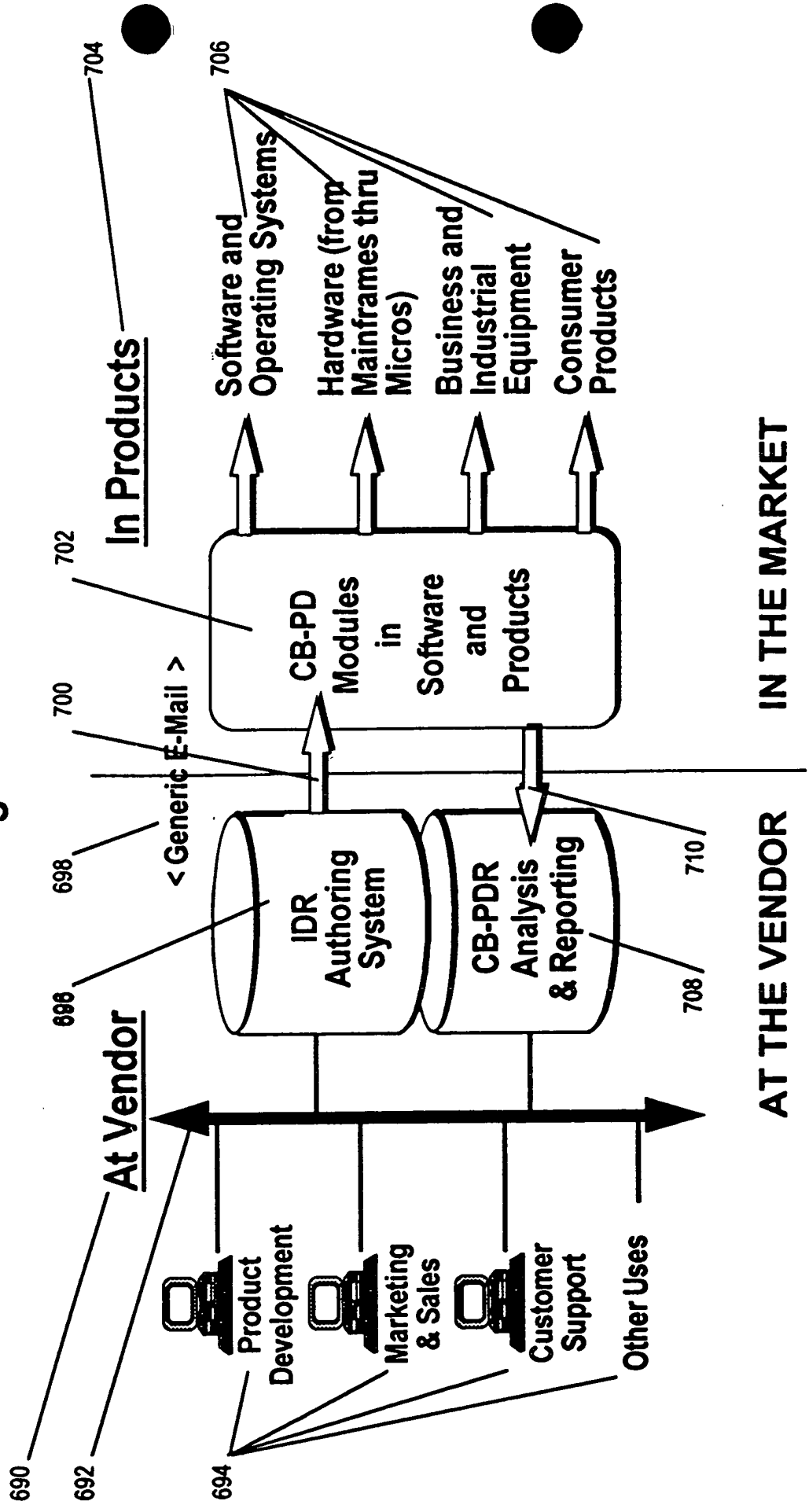






663333 663333 663333

Figure 18



# Figure 19

## Open Communications and Transactions

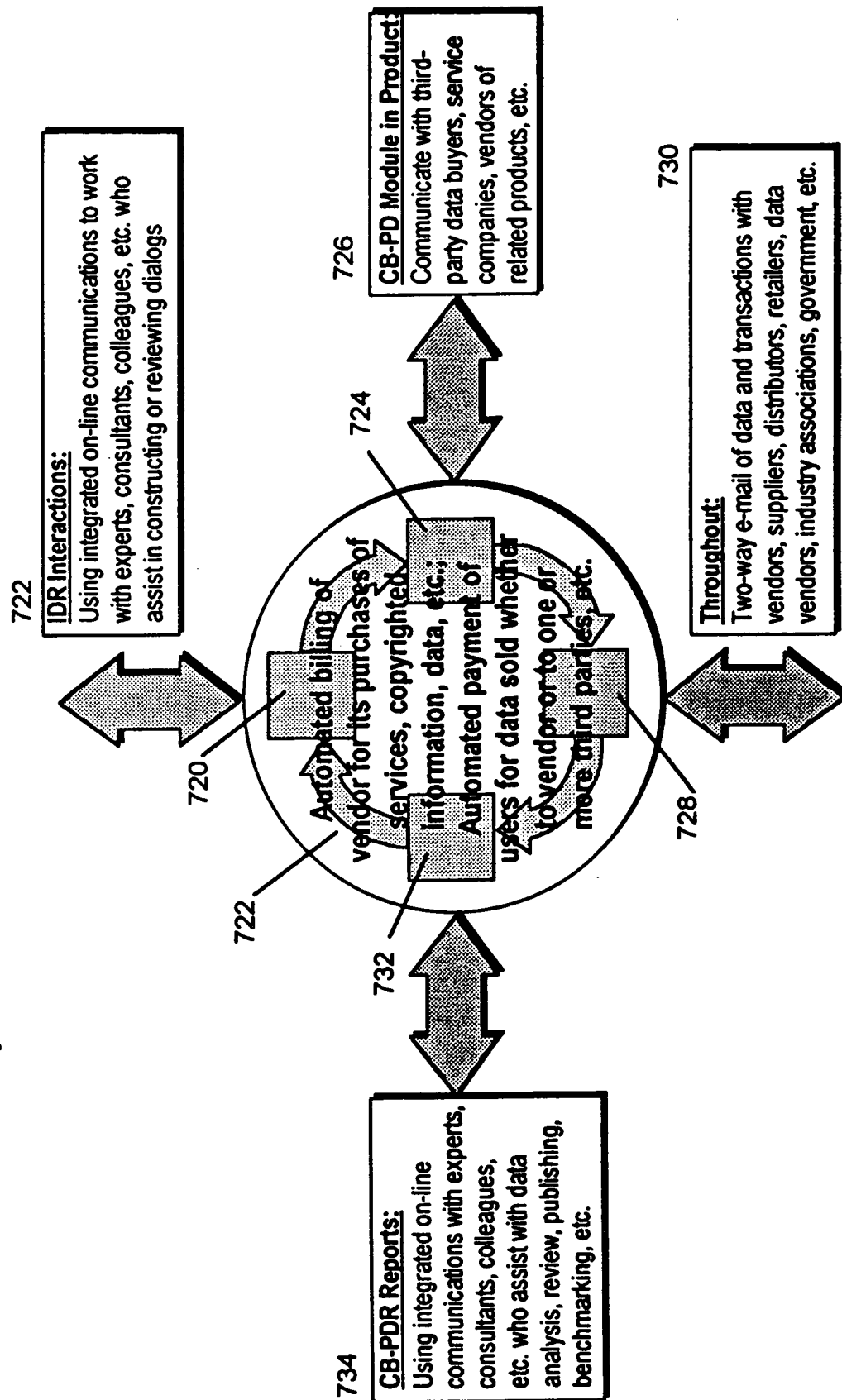


Figure 20

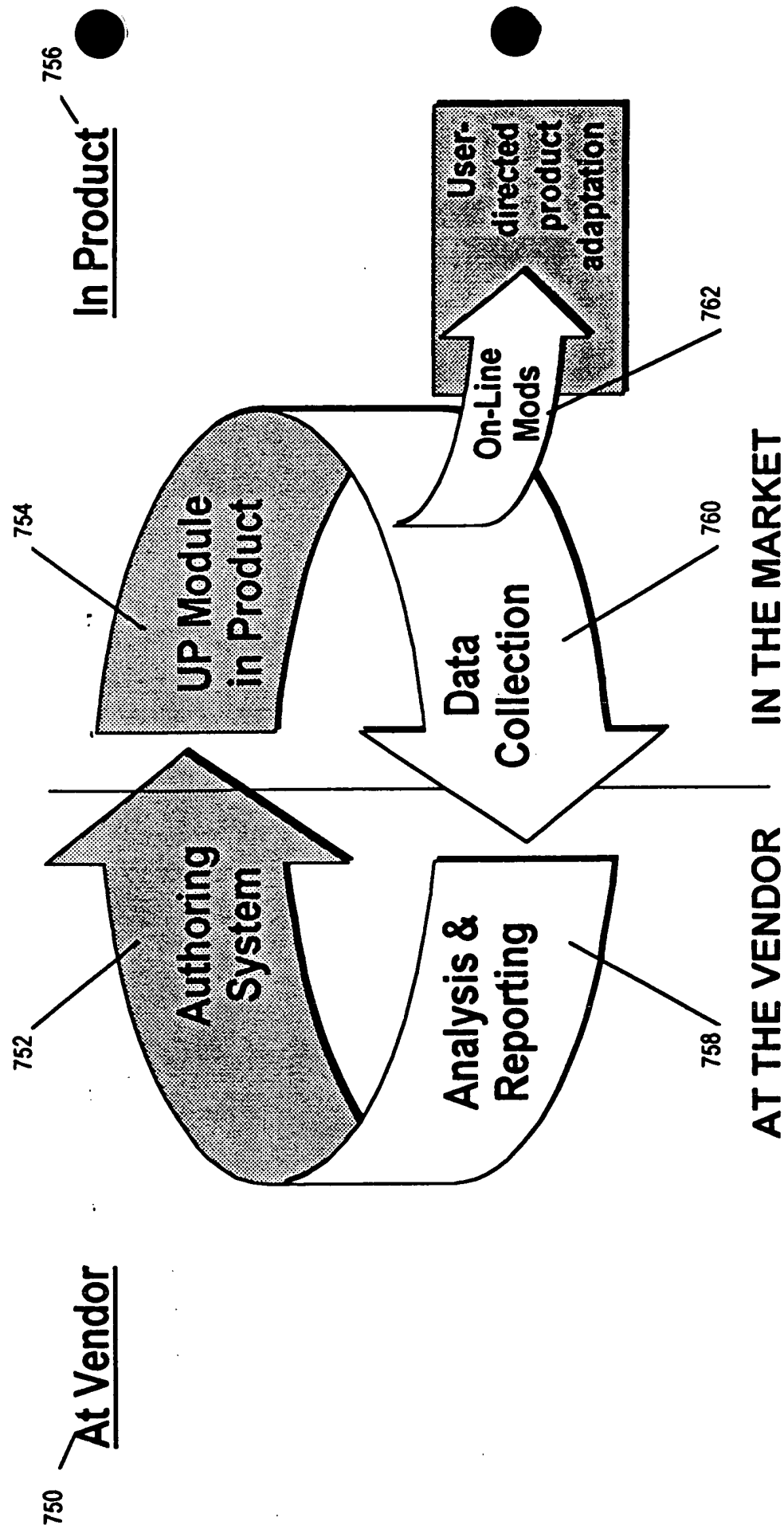
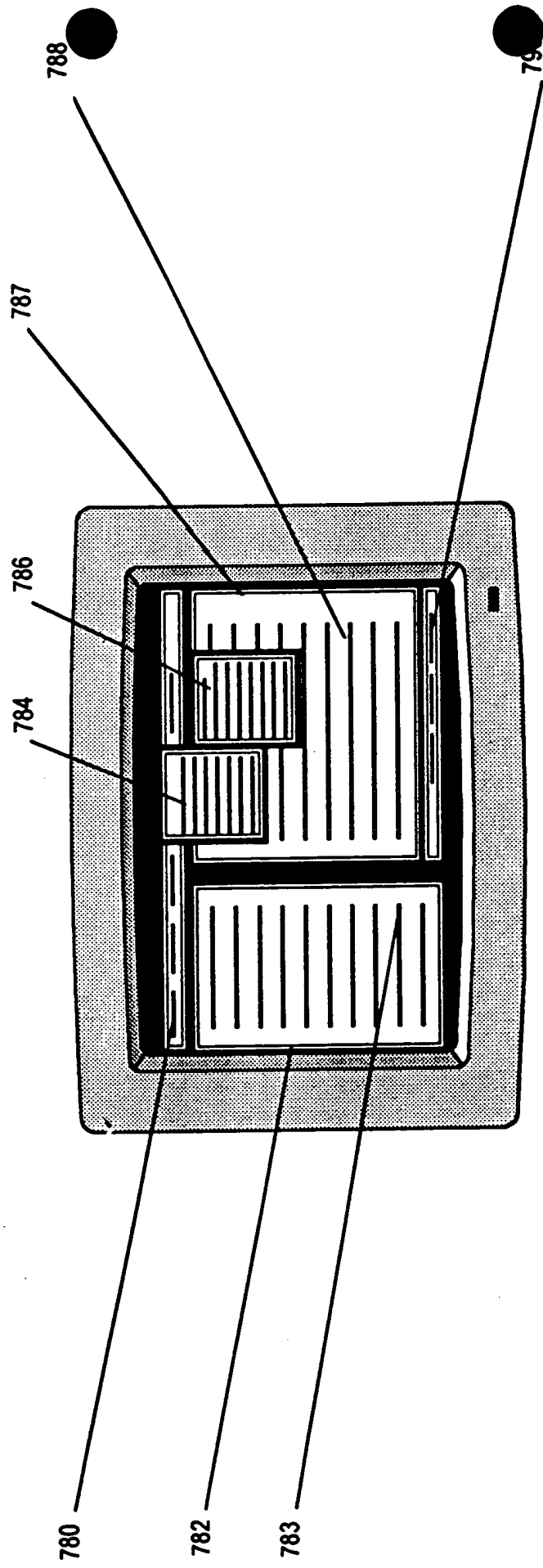


Figure 21



AT THE VENDOR

Figure 22

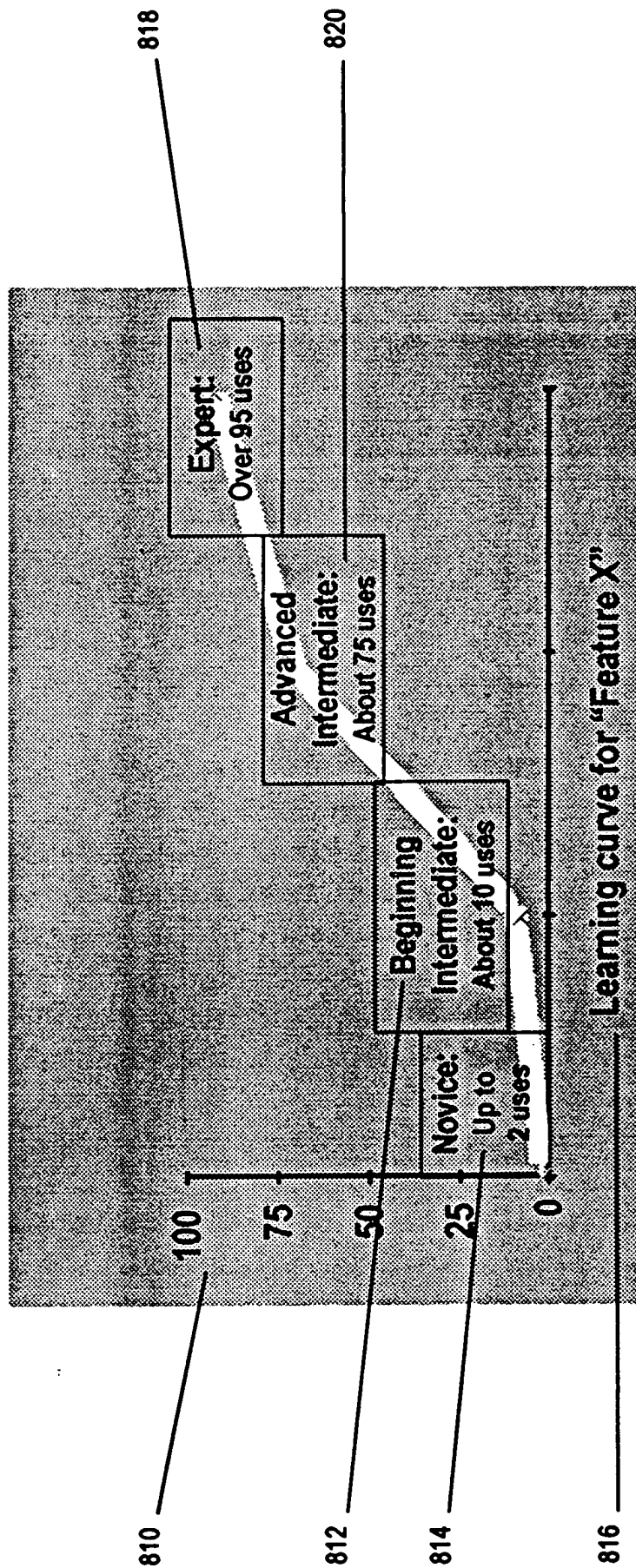


FIGURE 23

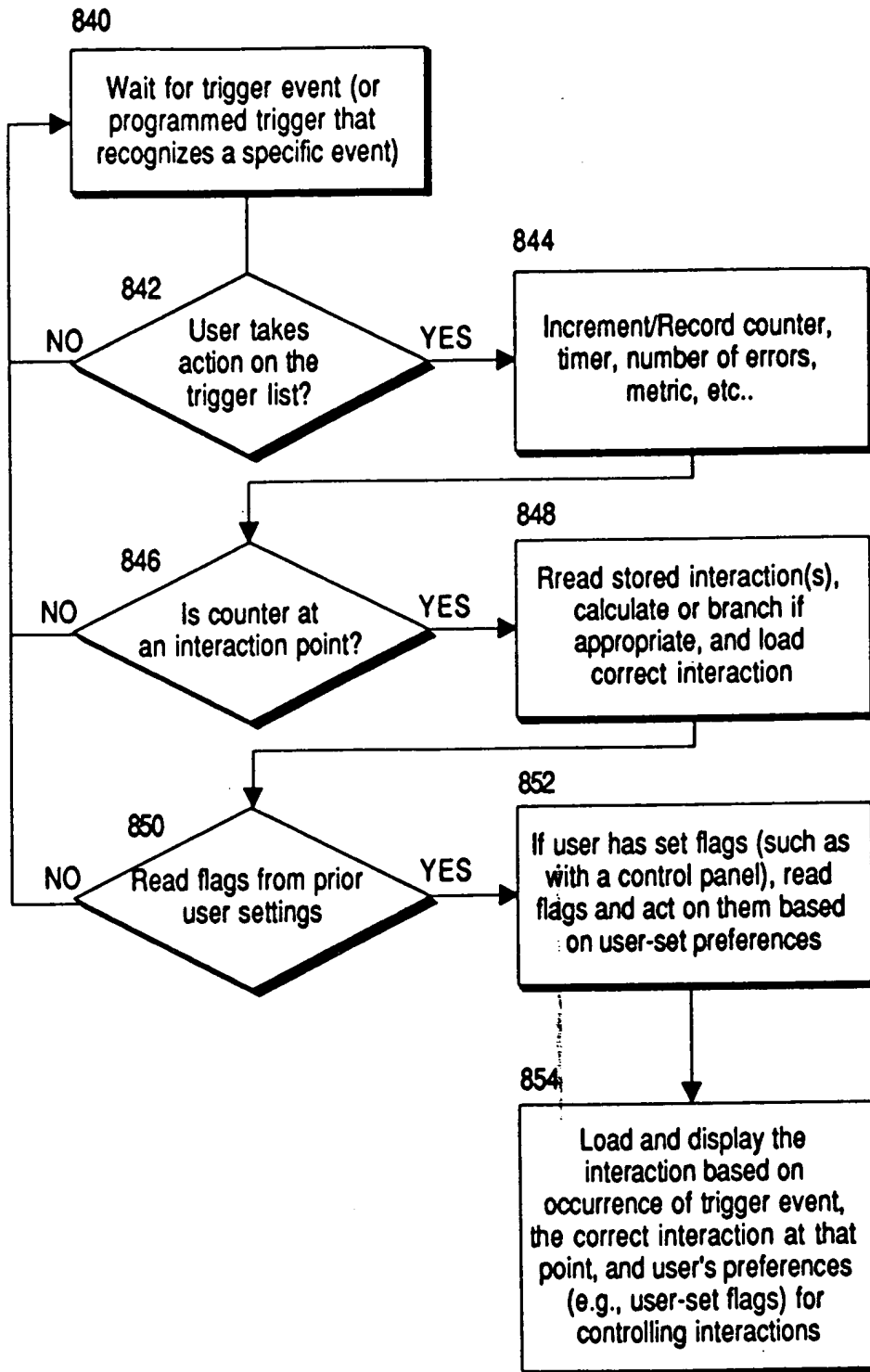


Figure 24

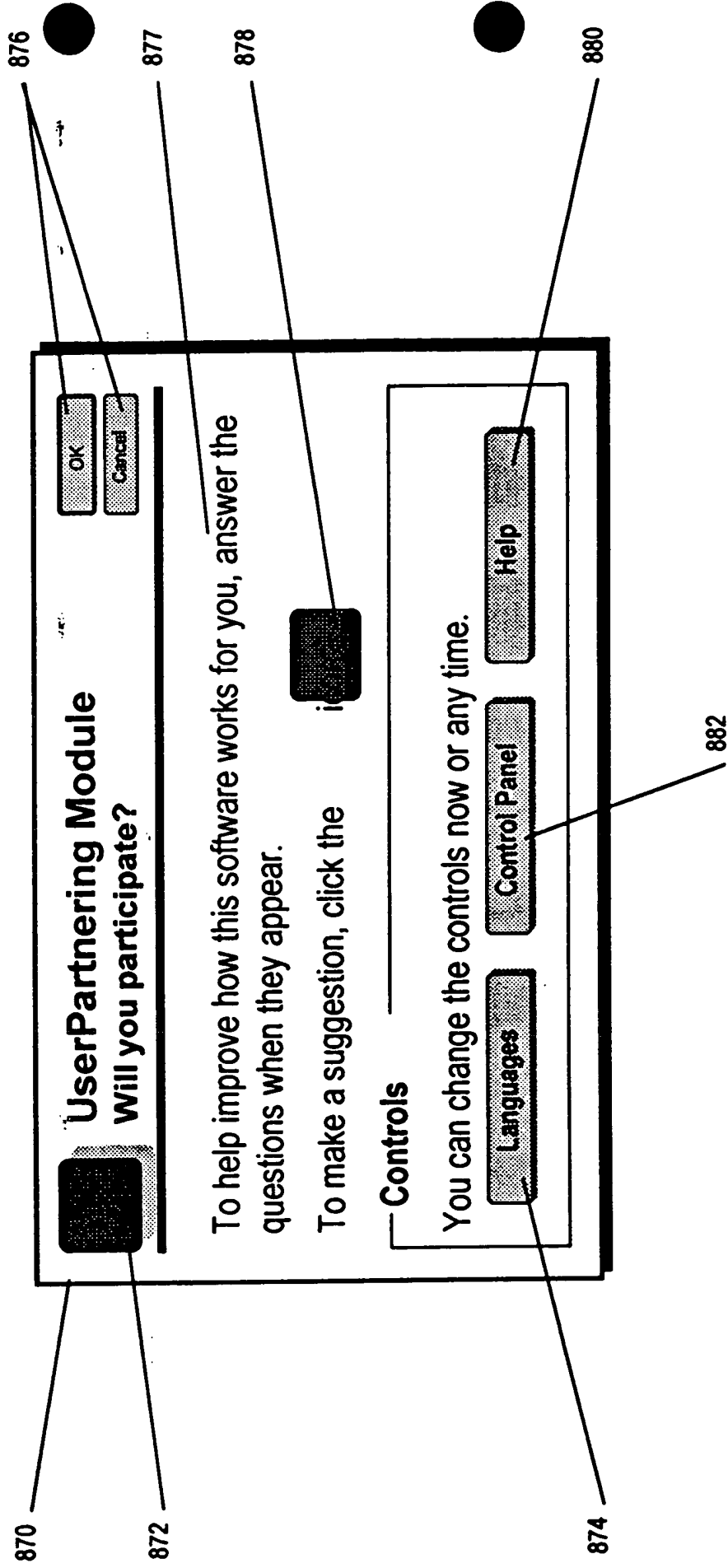
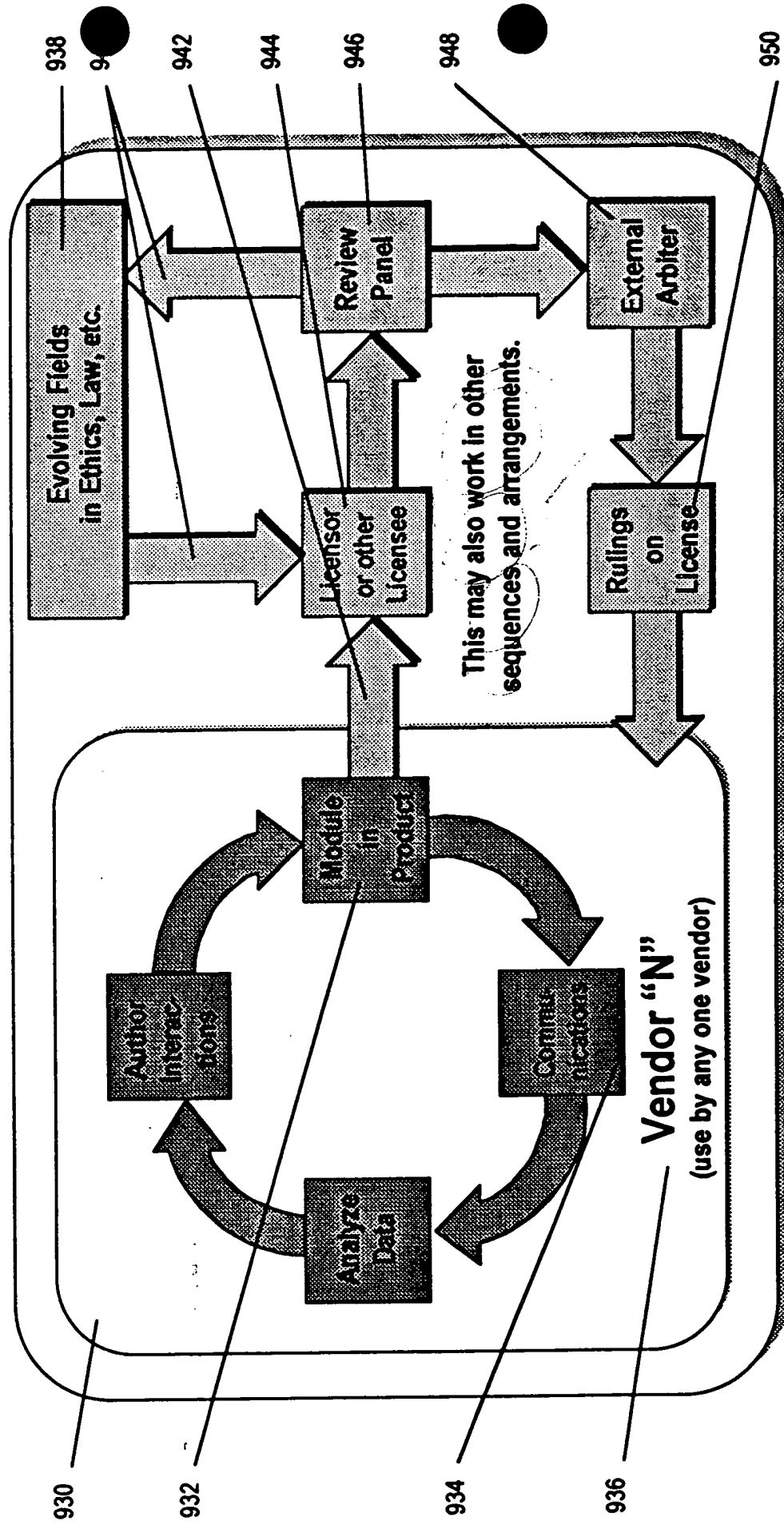






Figure 26



## 960



## AT THE VENDOR

## 996



## AT THE VENDOR

## 070

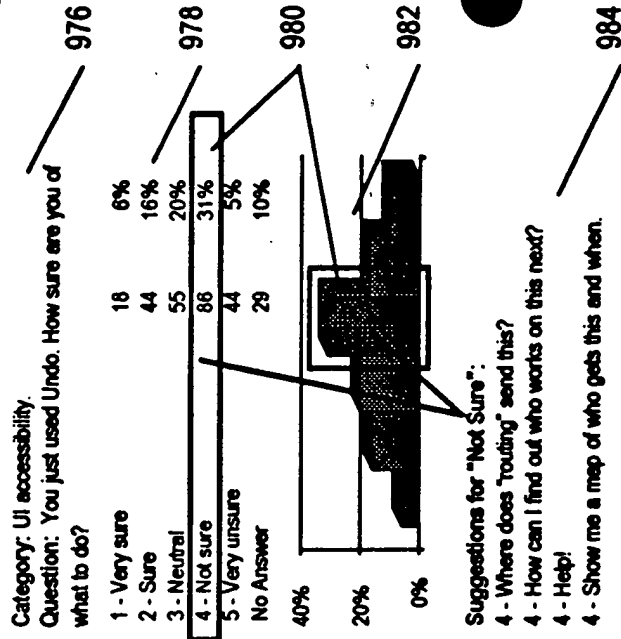


Figure 28

# Authoring System      UP Module      Analysis System

<u>Trigger Examples:</u> <ul style="list-style-type: none"> <li>•User problems</li> <li>•User successes</li> <li>•User questions</li> </ul>	<u>Dialogs:</u> <ul style="list-style-type: none"> <li>•Understand terms?</li> <li>•Know what to do?</li> <li>•The right features?</li> </ul>	<u>Findings:</u> <ul style="list-style-type: none"> <li>•Know what works</li> <li>•Learn the problems</li> <li>•Start fixes early</li> </ul>
<u>Trigger Examples:</u> <ul style="list-style-type: none"> <li>•Unused features</li> <li>•Unanswered UI questions</li> </ul>	<u>Dialogs:</u> <ul style="list-style-type: none"> <li>•Try this feature...</li> <li>•Help us figure out this problem...</li> </ul>	<u>Findings:</u> <ul style="list-style-type: none"> <li>•Why features are not used</li> <li>•Interpret problems</li> </ul>
<u>Trigger Examples:</u> <ul style="list-style-type: none"> <li>•Known problems</li> <li>•Productivity</li> <li>•Performance</li> </ul>	<u>Dialogs:</u> <ul style="list-style-type: none"> <li>•Which UI solution do you want?</li> <li>•How to improve it?</li> </ul>	<u>Findings:</u> <ul style="list-style-type: none"> <li>•Choose UI designs</li> <li>•How to make users better and happier</li> </ul>

Week 1

992

Week 2

994

Week n through  
end

996

998



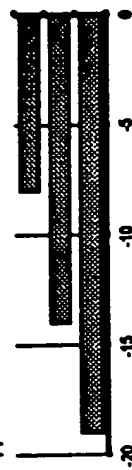
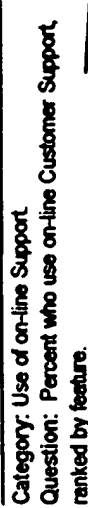
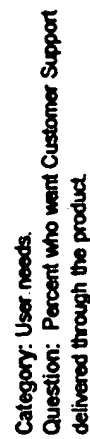
## 1050



## 1056

1062

## 1060



## AT THE VENDOR

# IN THE MARKET

## AT THE VENDOR

## Figure 30

Figure 31

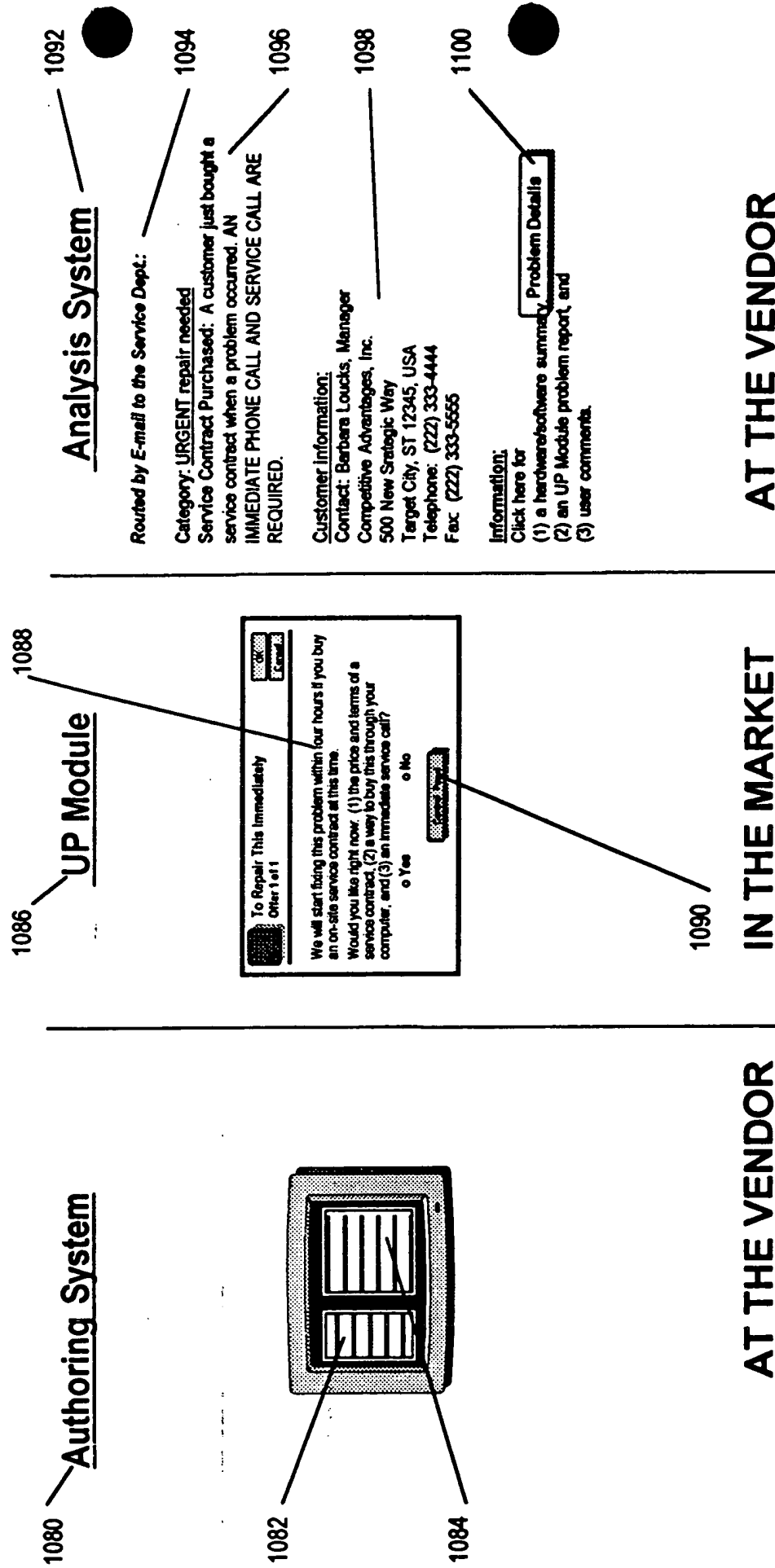


Figure 32

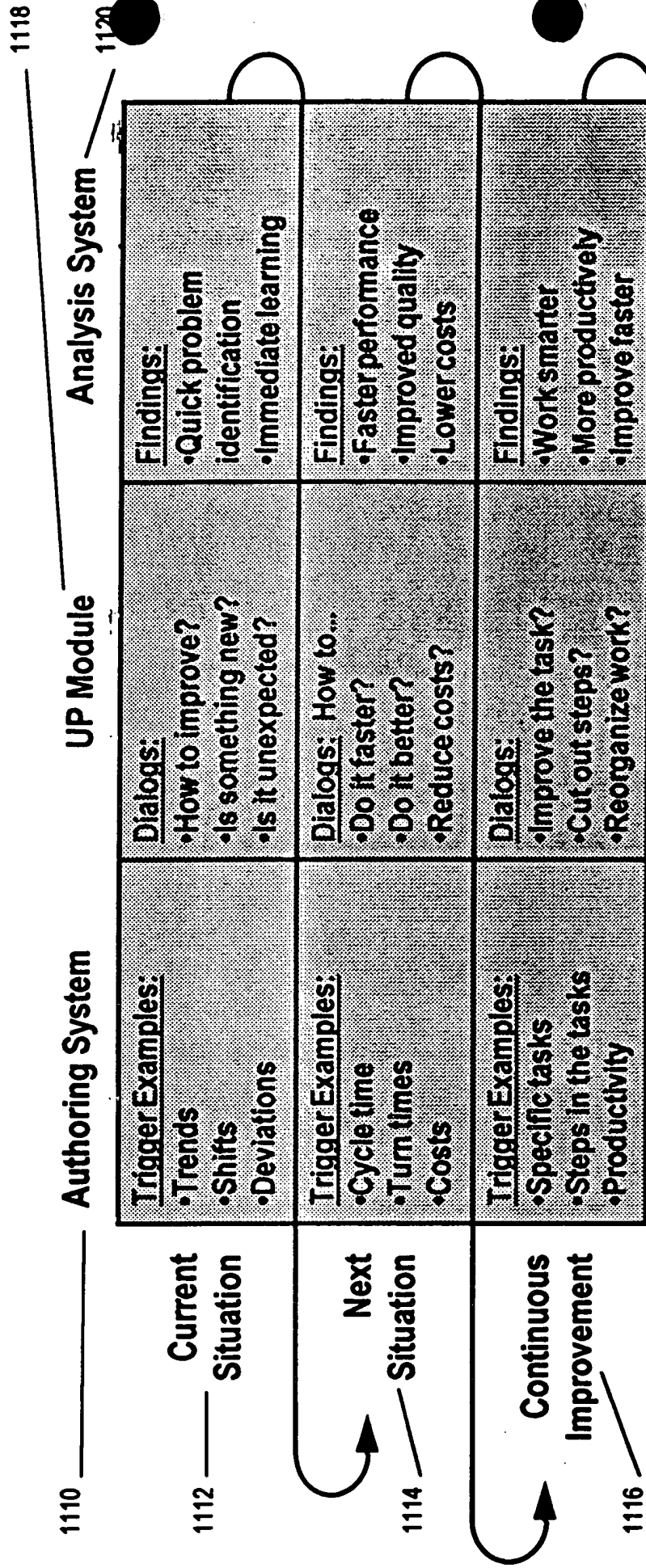
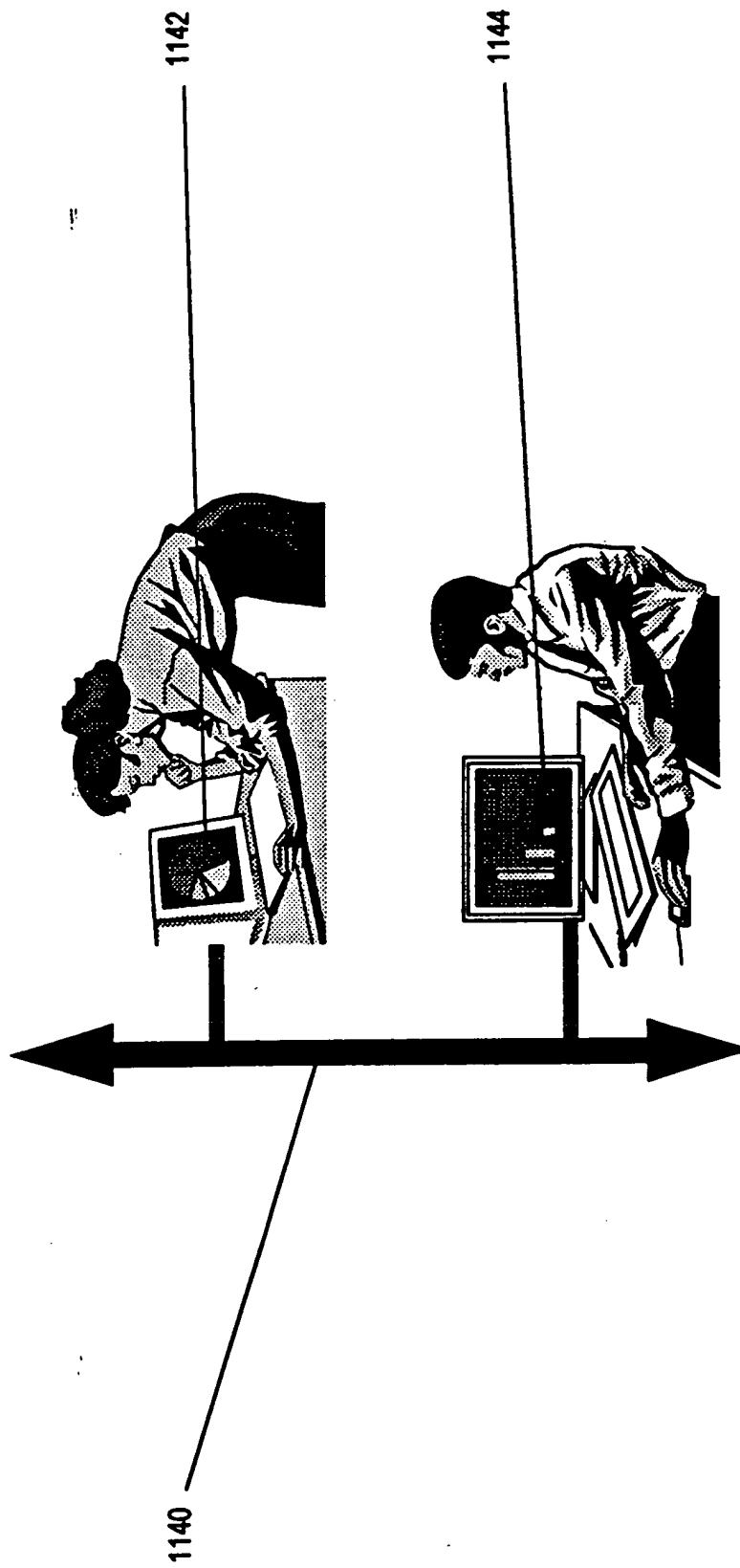




Figure 33



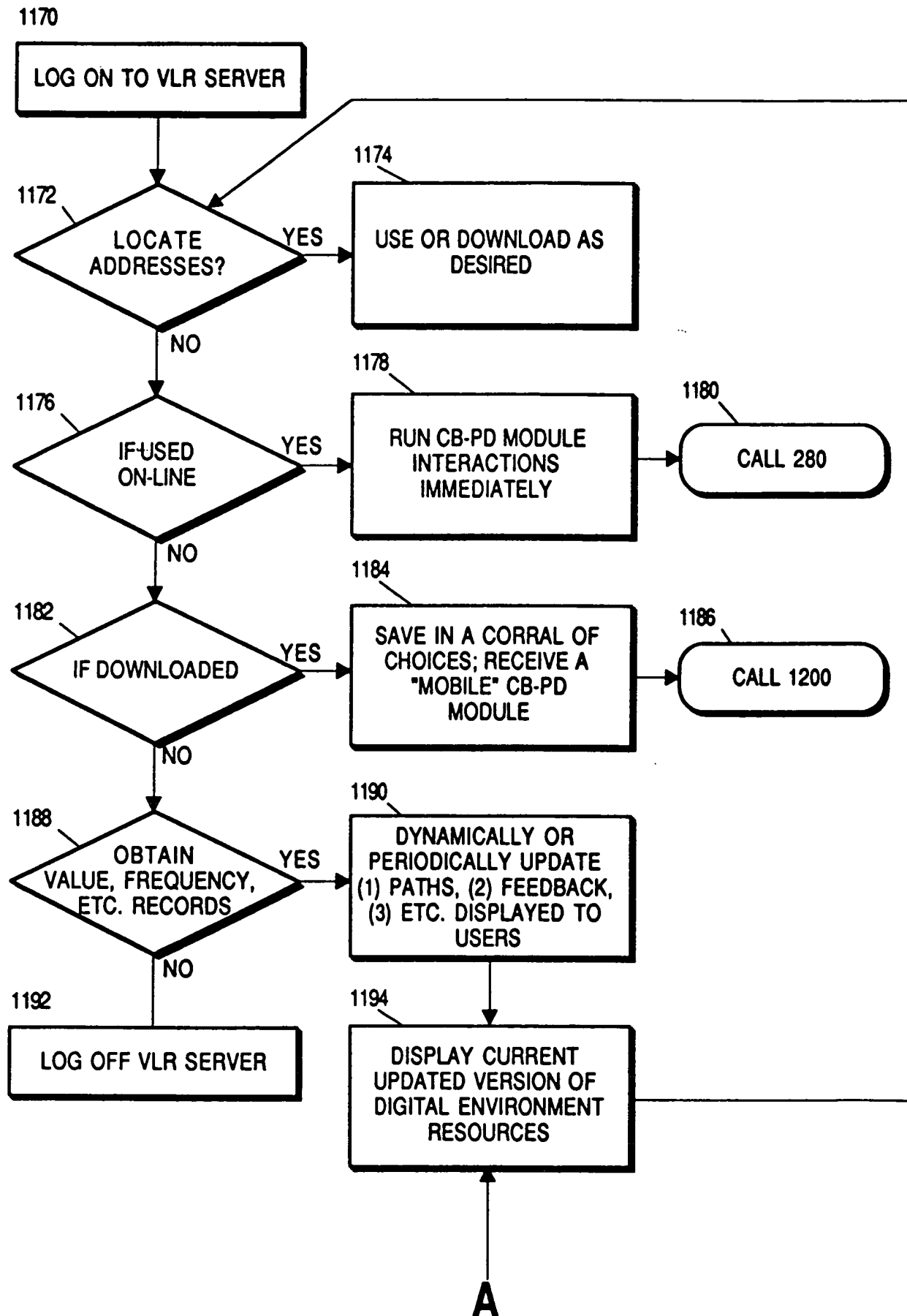
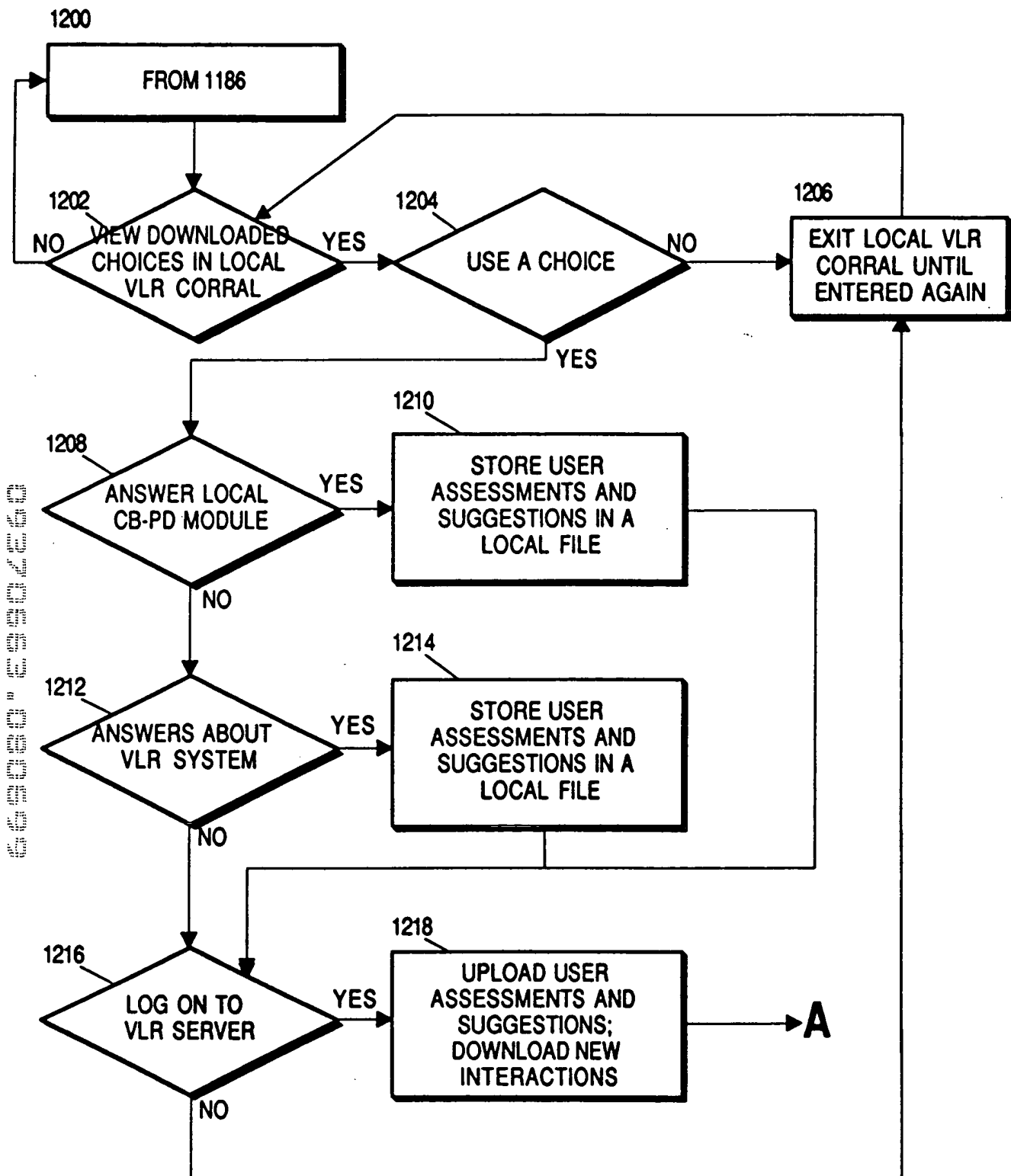
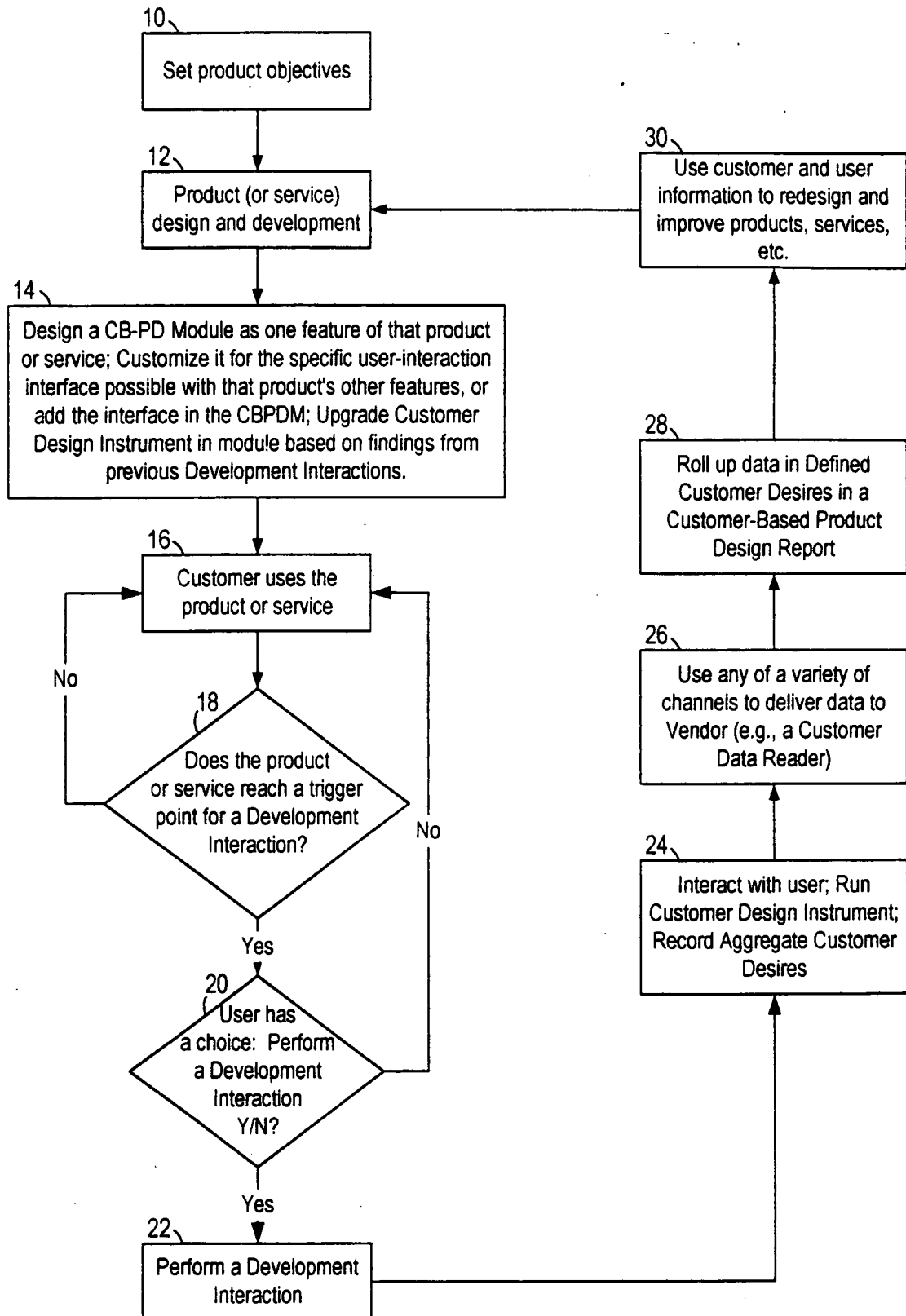
[illegible]

FIGURE 34B



APPROVED	O.G. FIG. 24	
BY	CLASS	SUBCLASS
DRAFTSMAN	705	1

Figure 1



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 2

How much did you like or dislike the method that you just used to program the fax machine's user settings?

Strongly like	Neutral	Strongly dislike
1	3	5
2	4	

> Enter your choice to continue, # to exit.

40: Display area (enclosed in a rounded rectangle)

42: Power button (rectangle)

44: Left circular button

46: Four horizontal bars of increasing length

48: Right circular button

50: Three vertical dots

52: Top horizontal bar

54: Second horizontal bar

56: Dashed circle

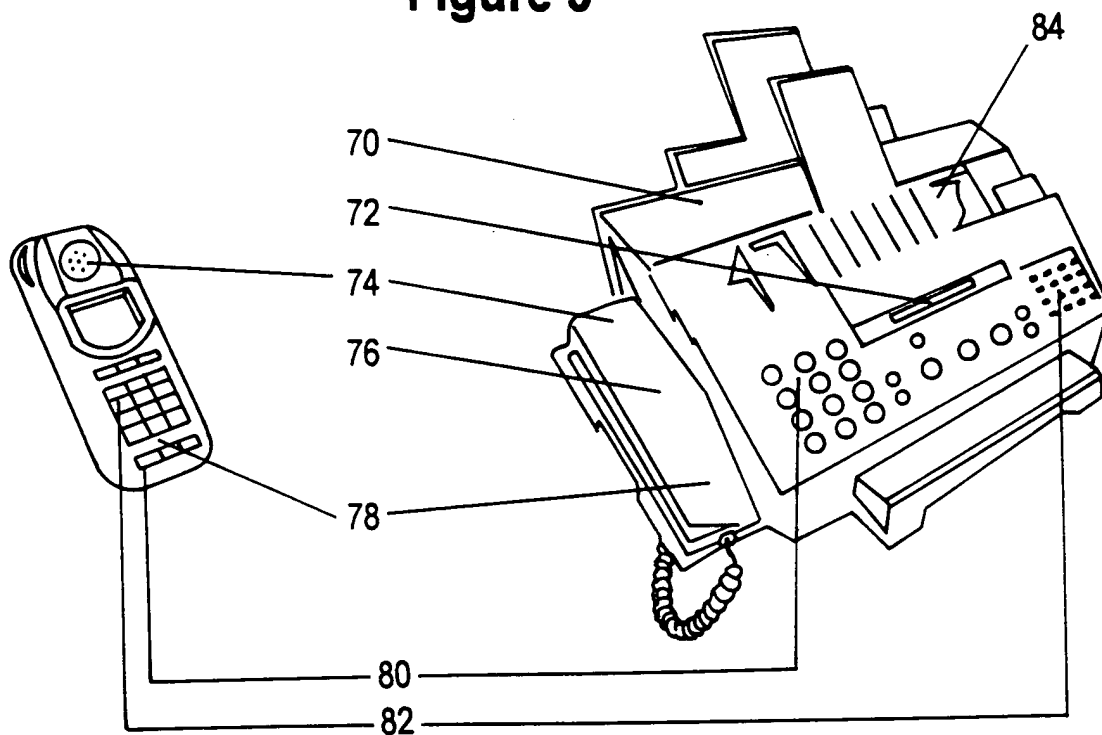
58: First column of four square buttons

60: Second column of four square buttons

62: Third column of four square buttons

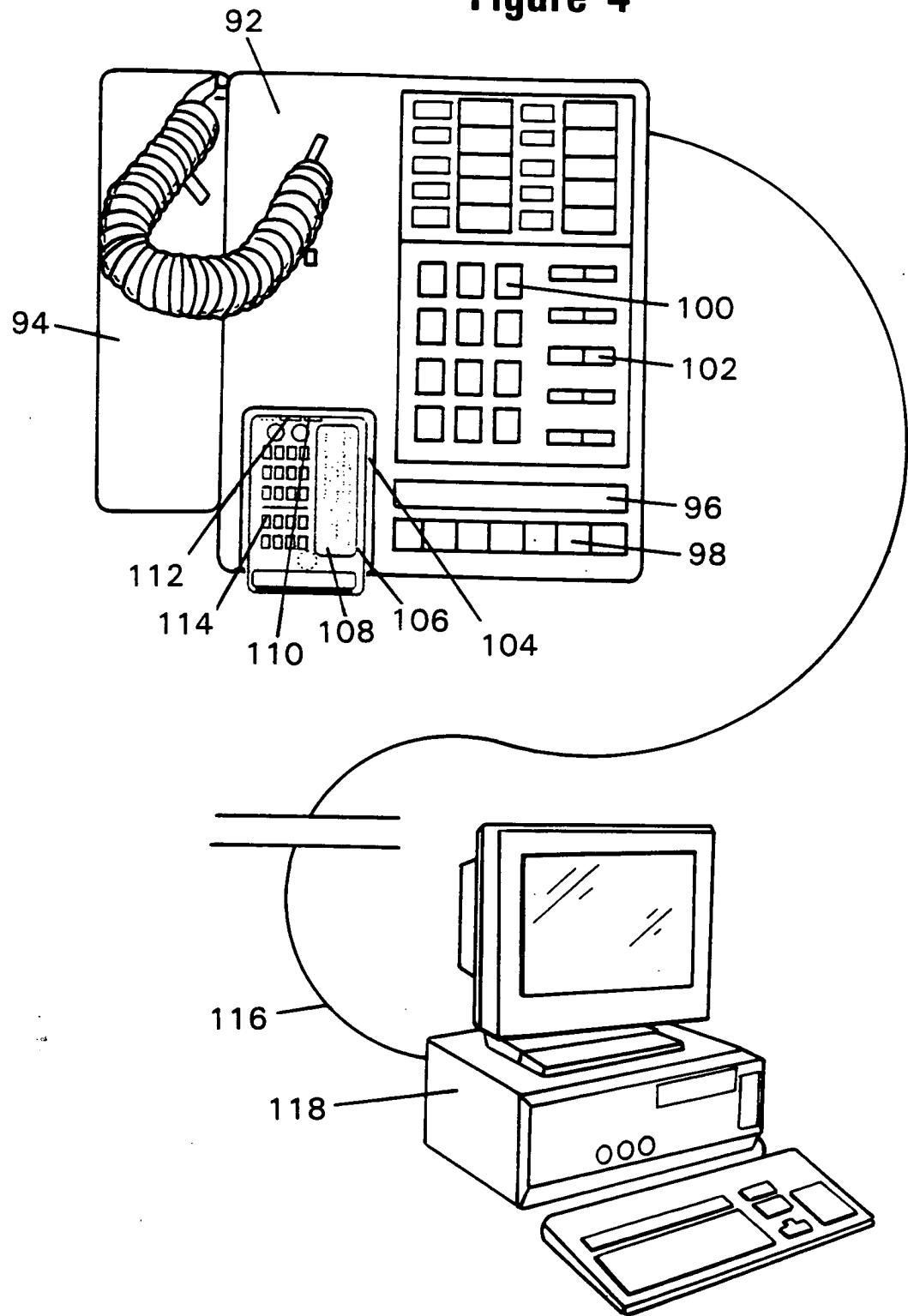
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 3**



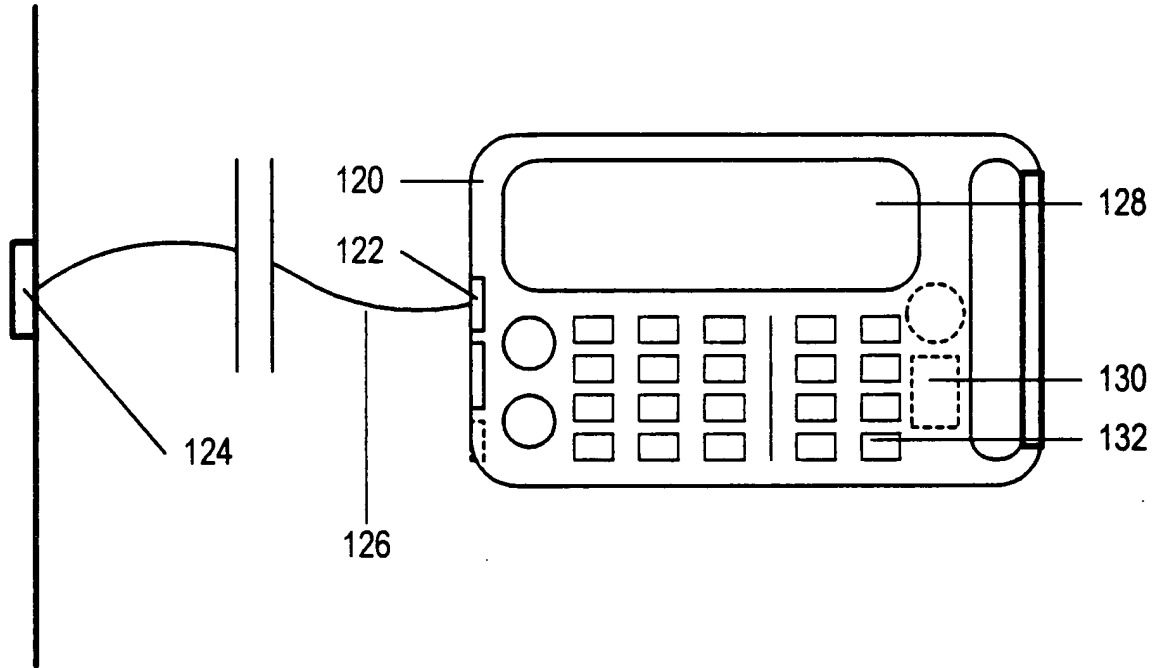
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 4**



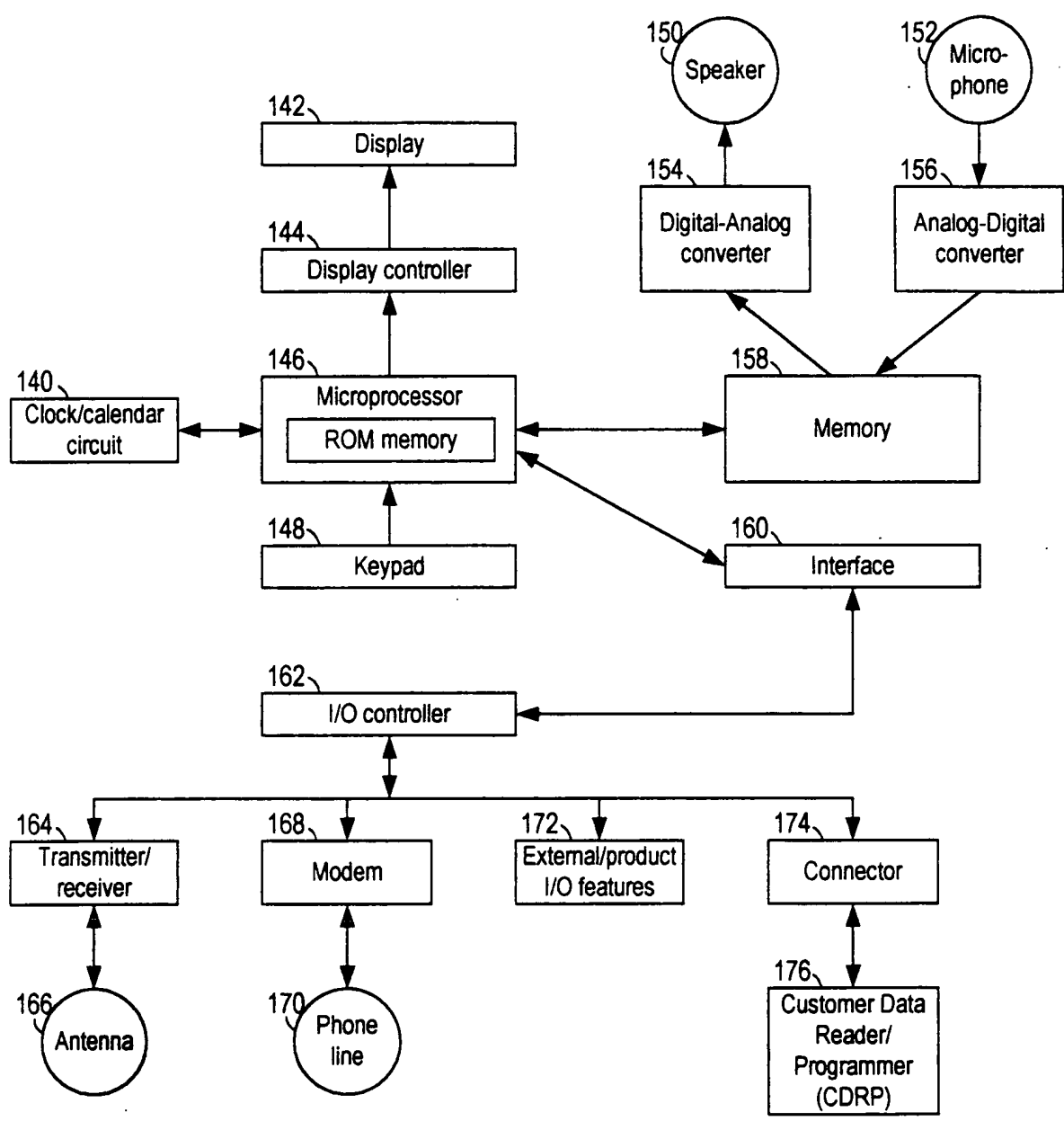
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 5



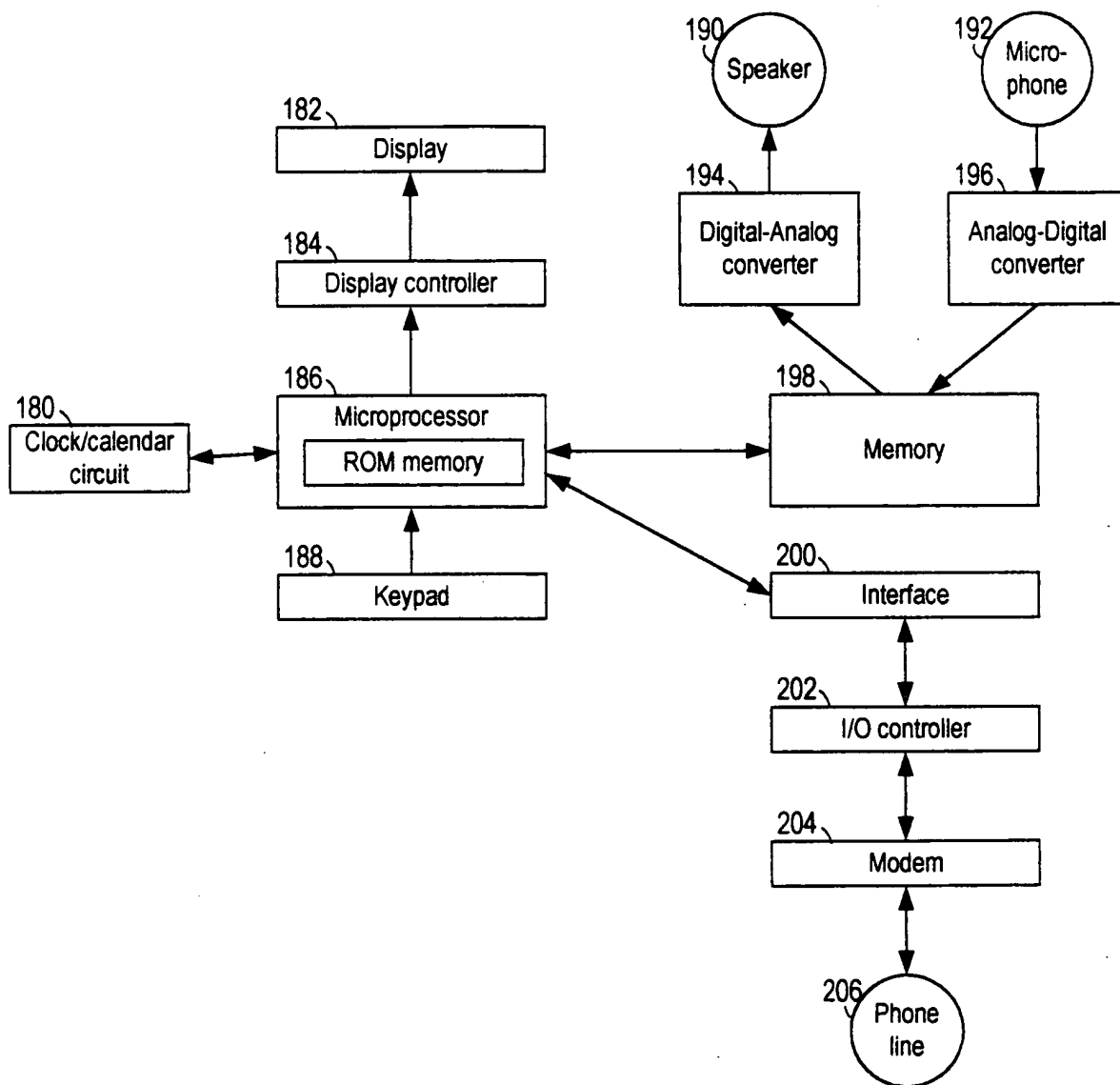


# Figure 6



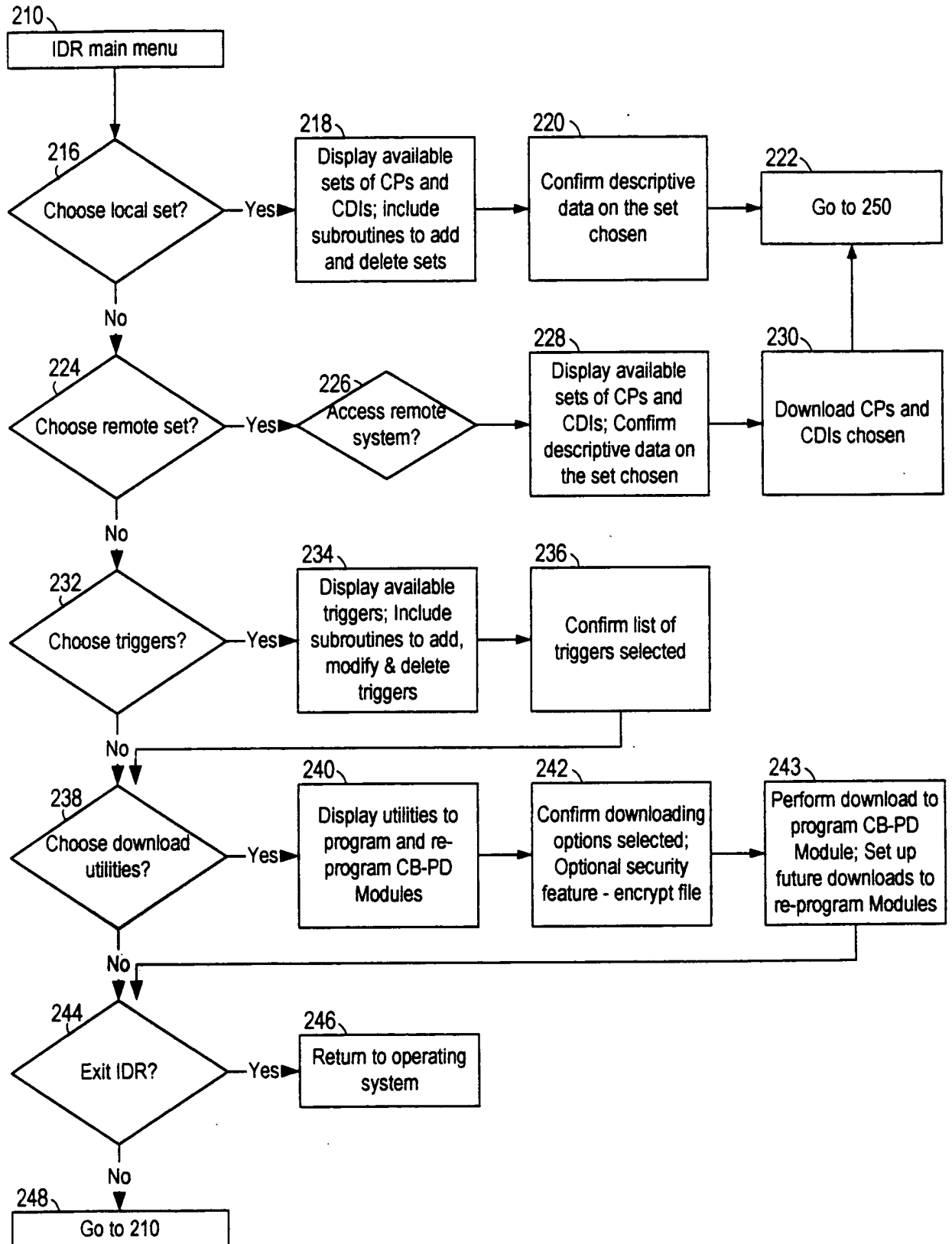
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 7



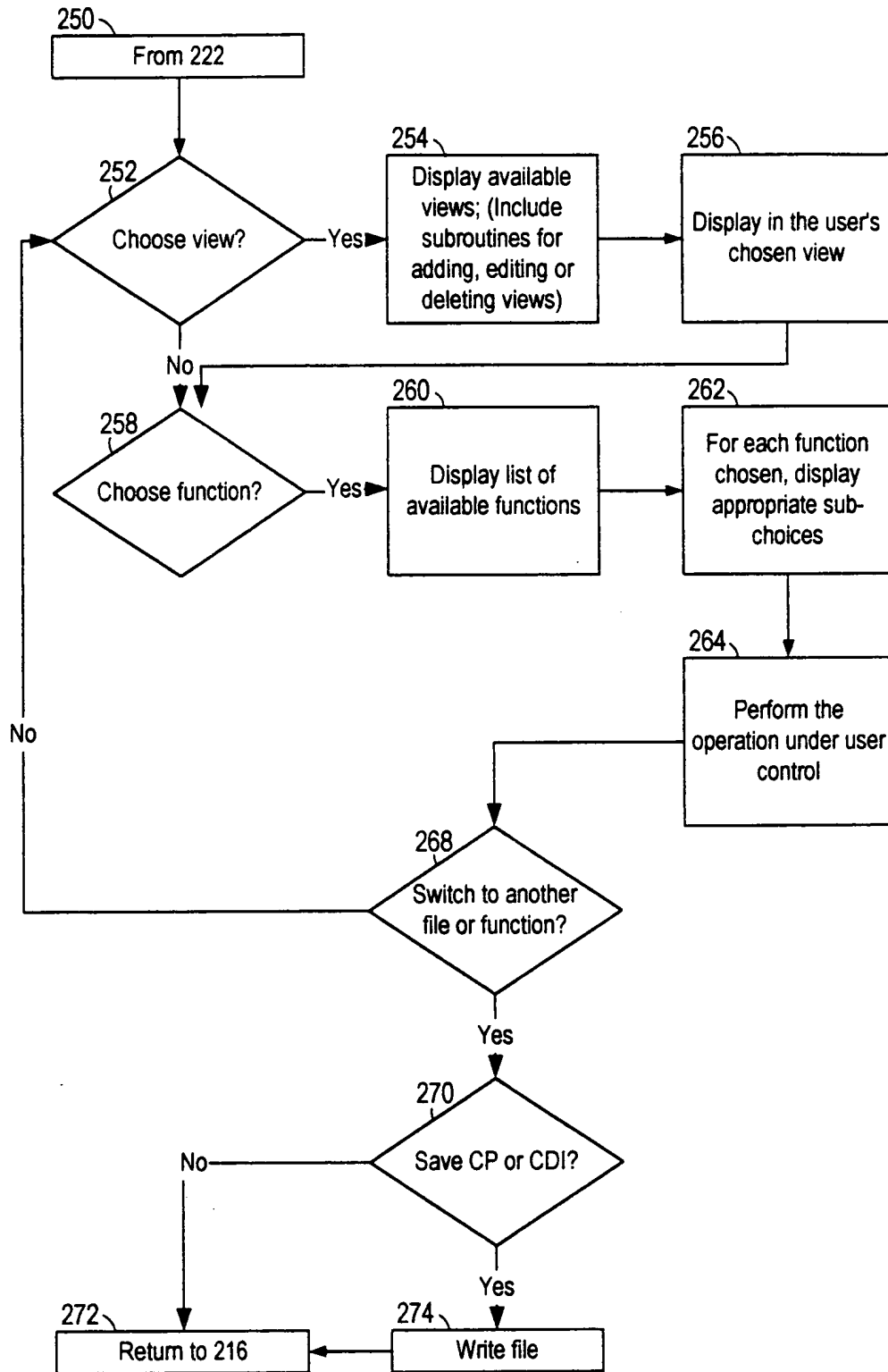
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 8**



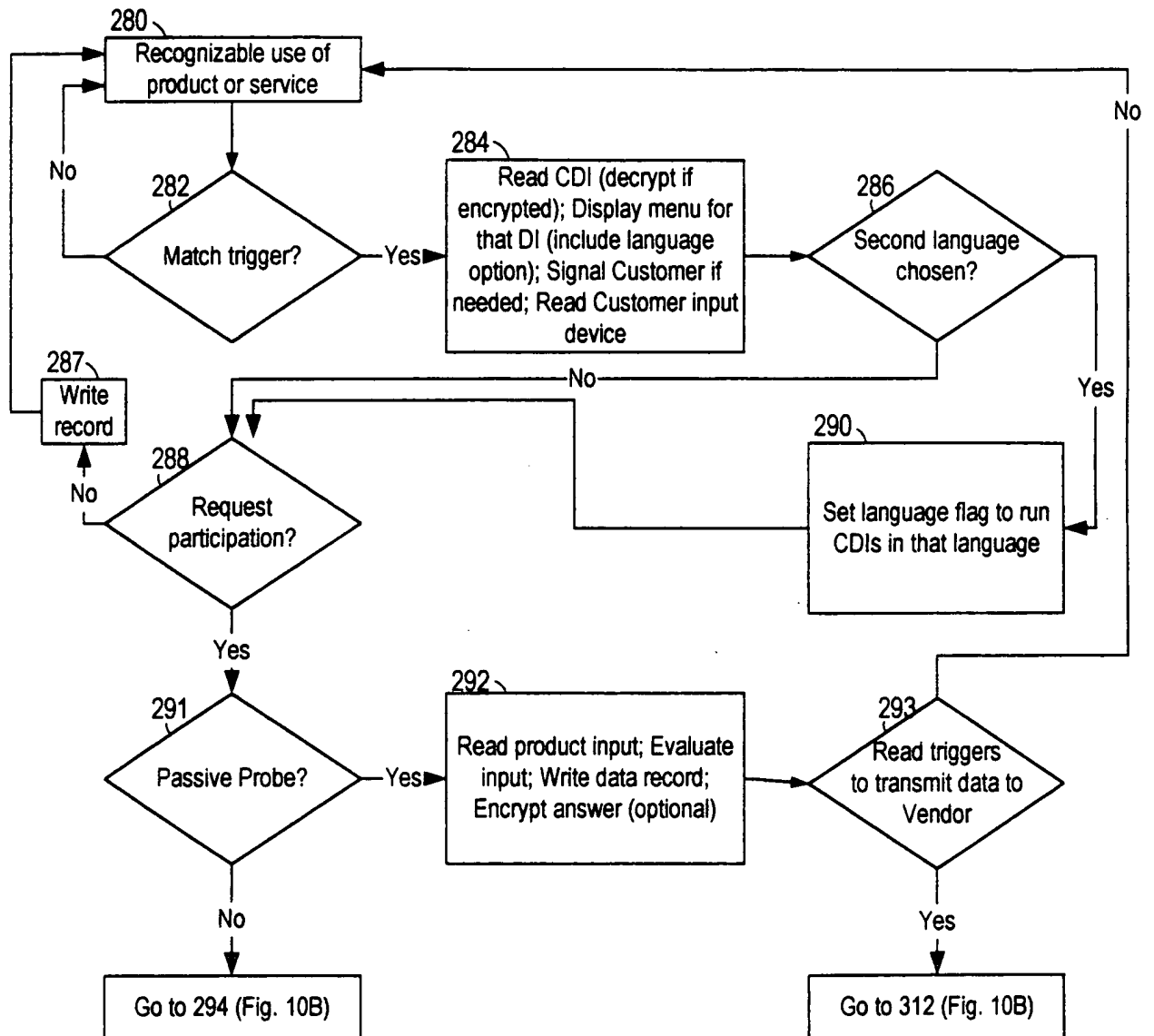
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 9**



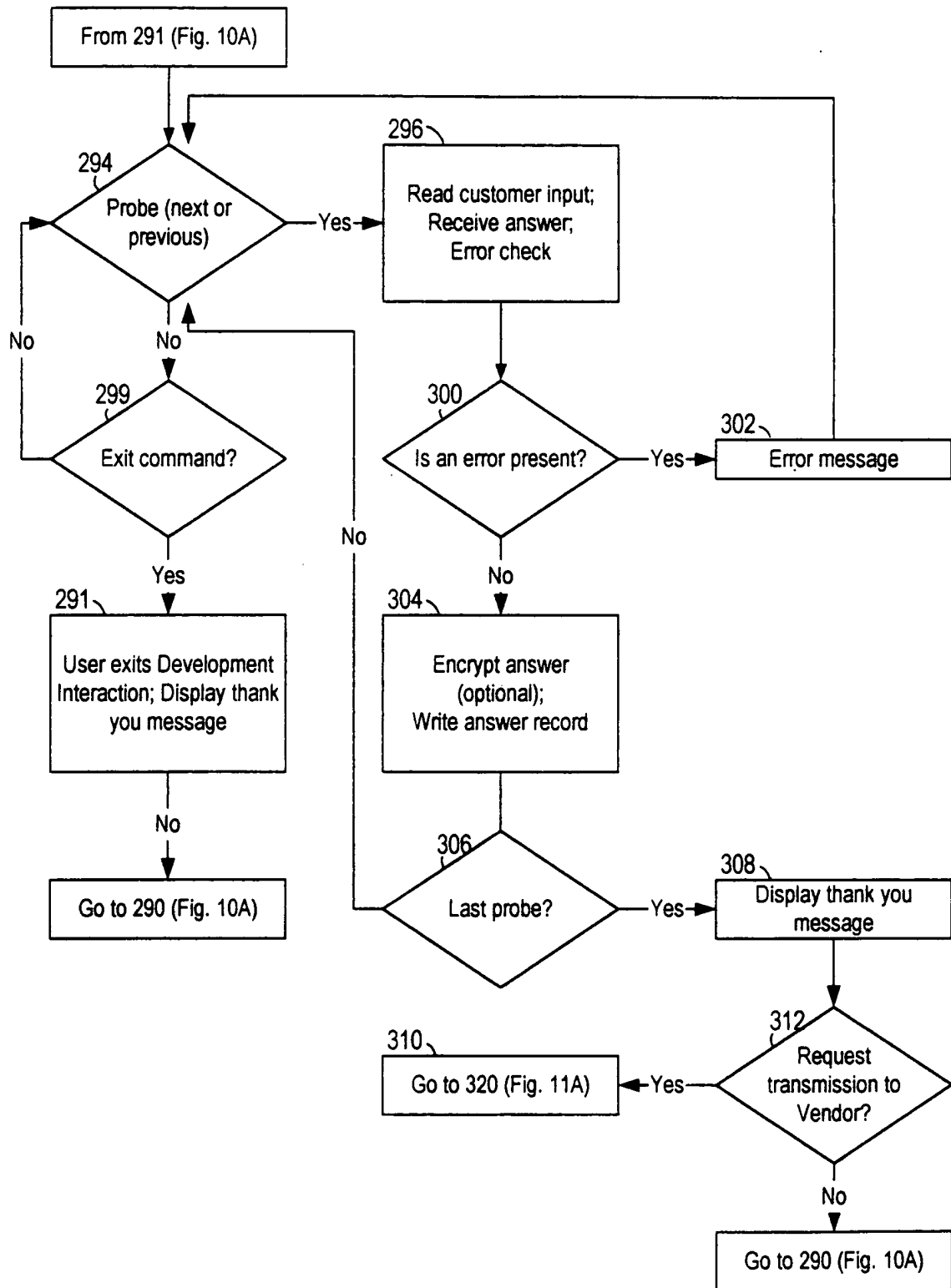
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 10A



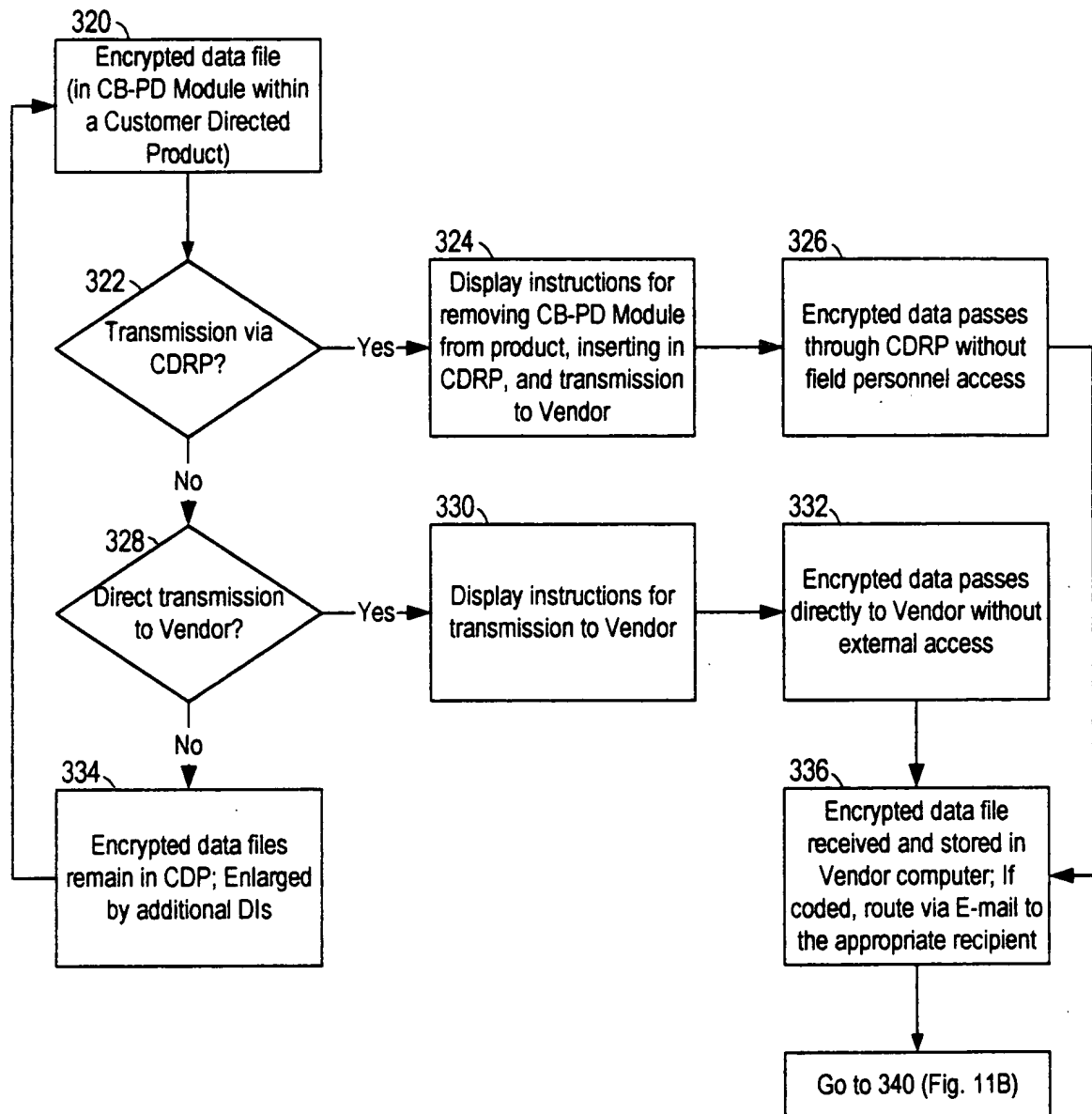
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 10B



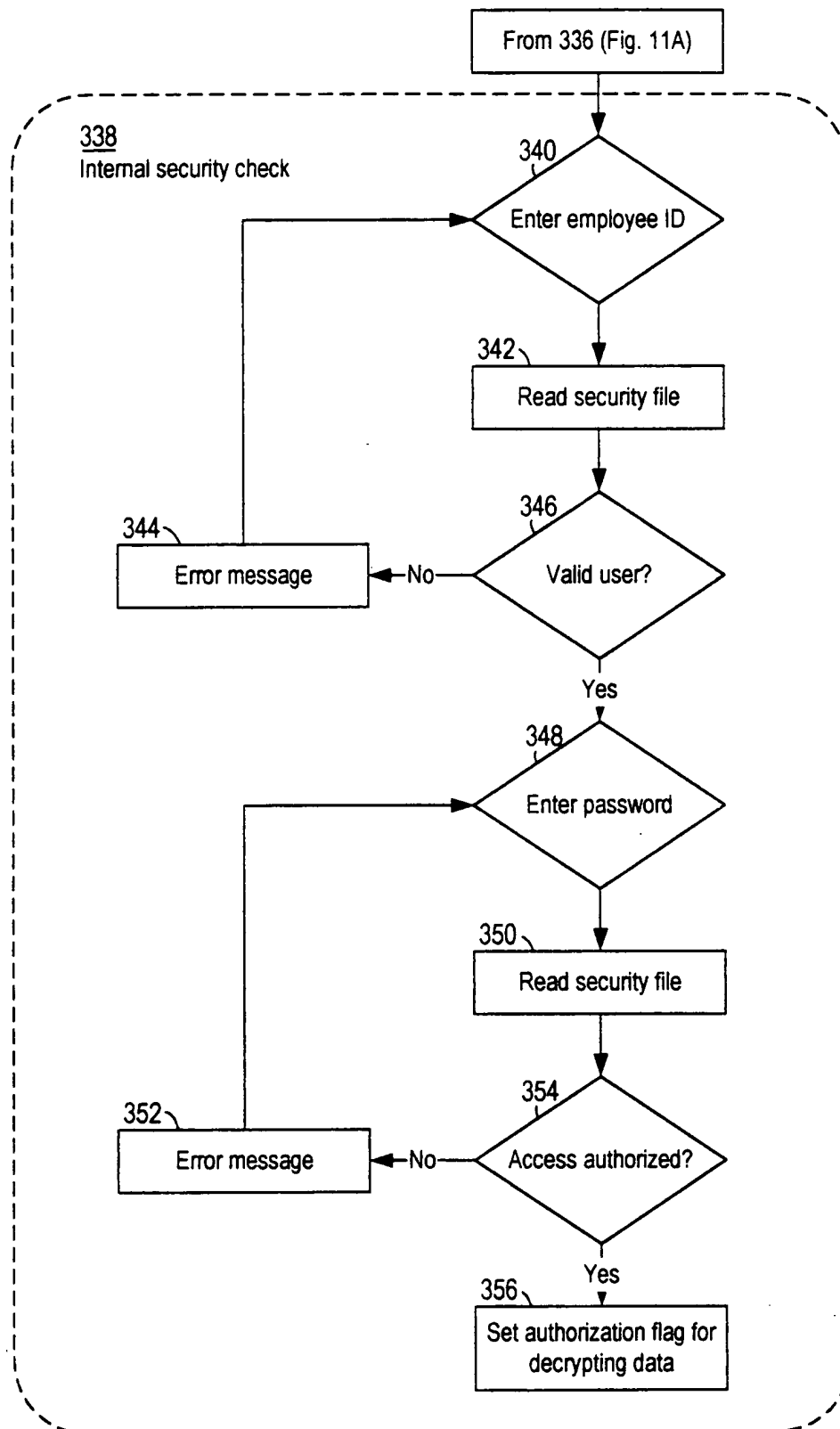
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 11A



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

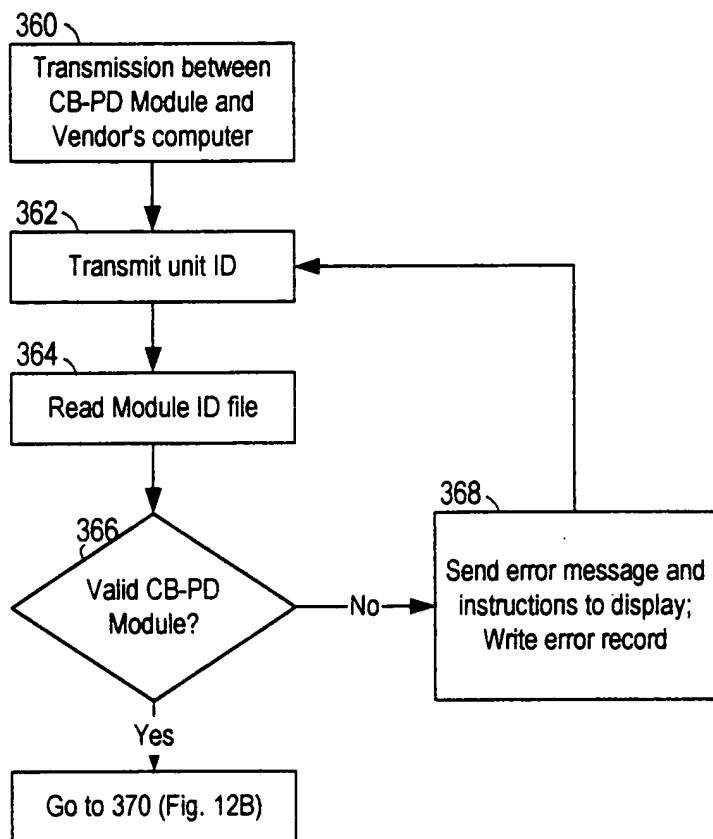
Figure 11B





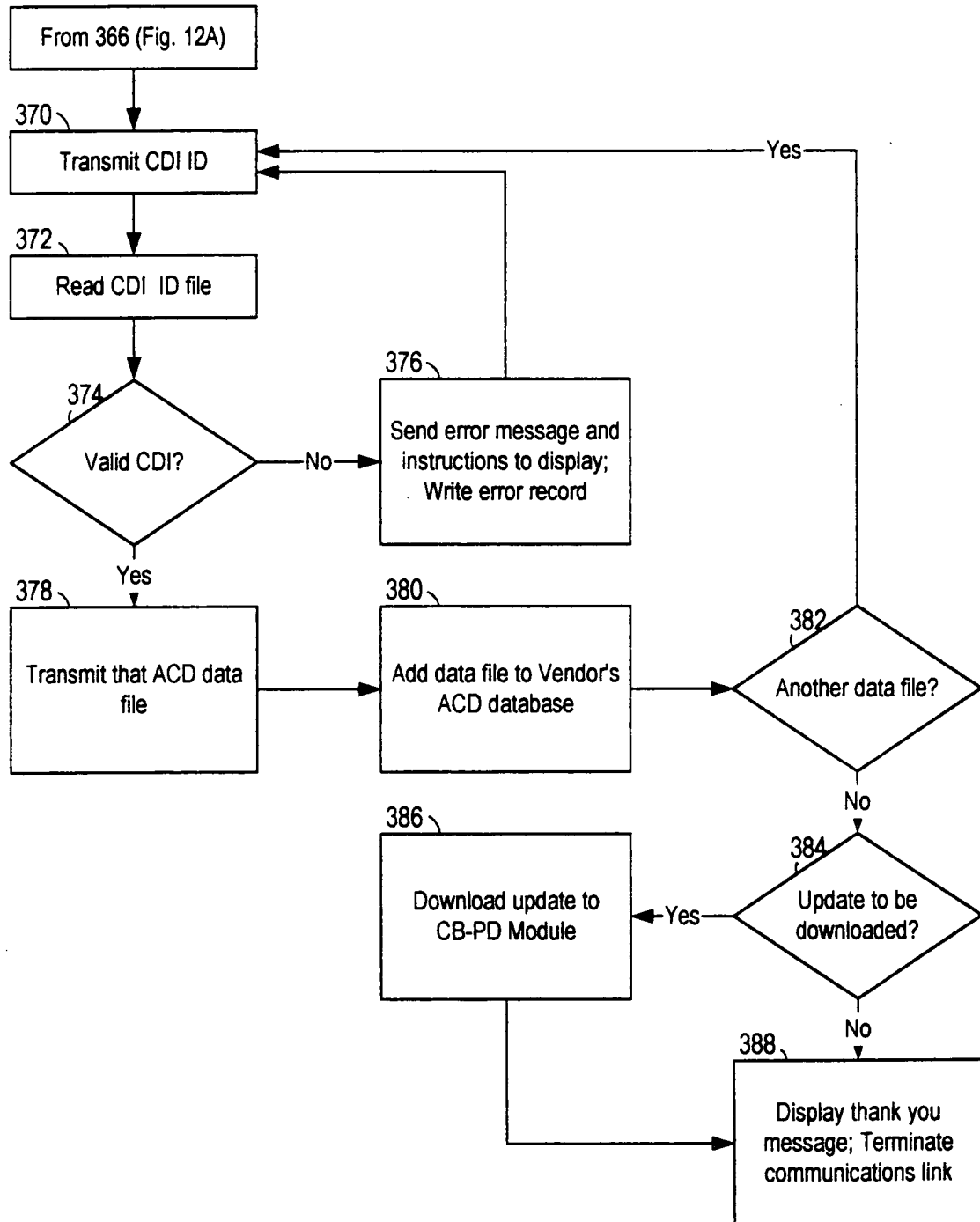
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 12A

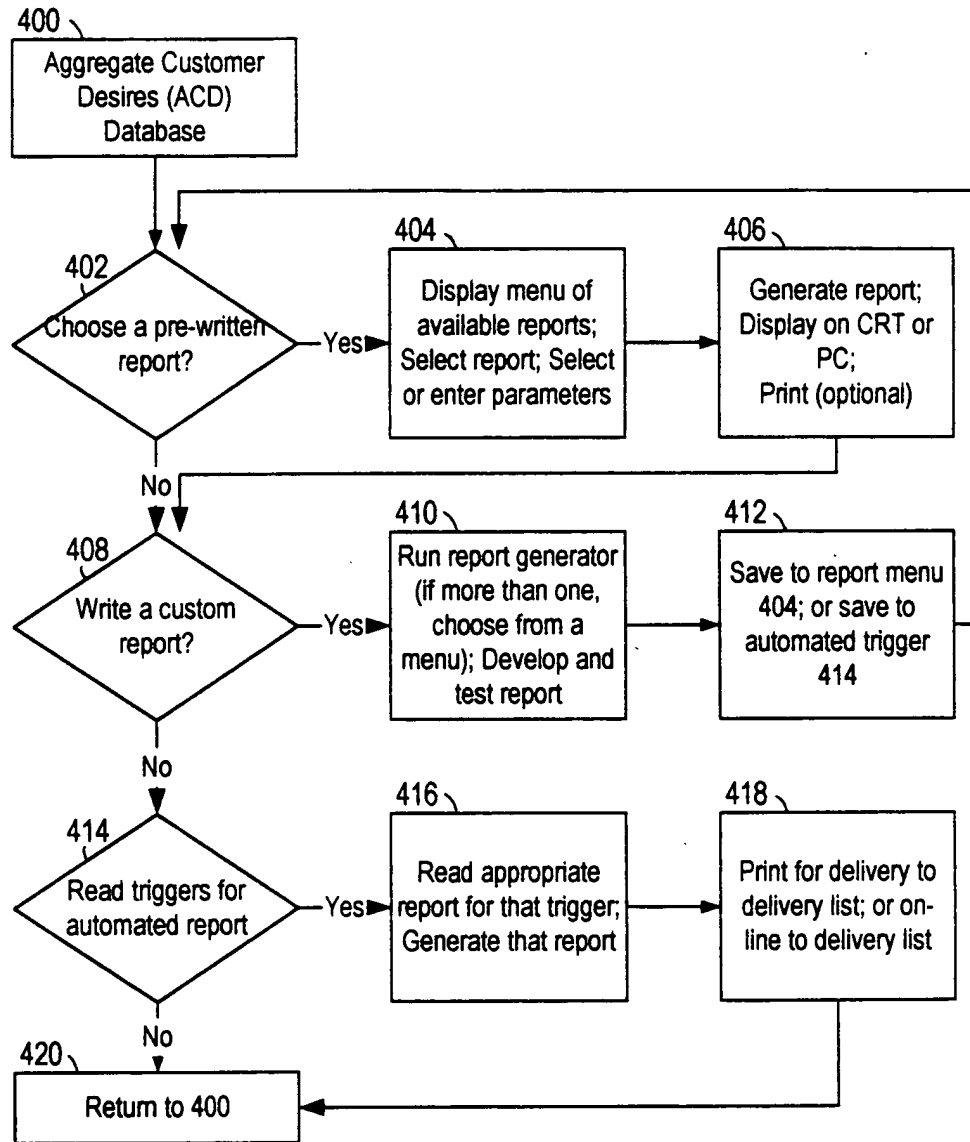


APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 12B



# Figure 13



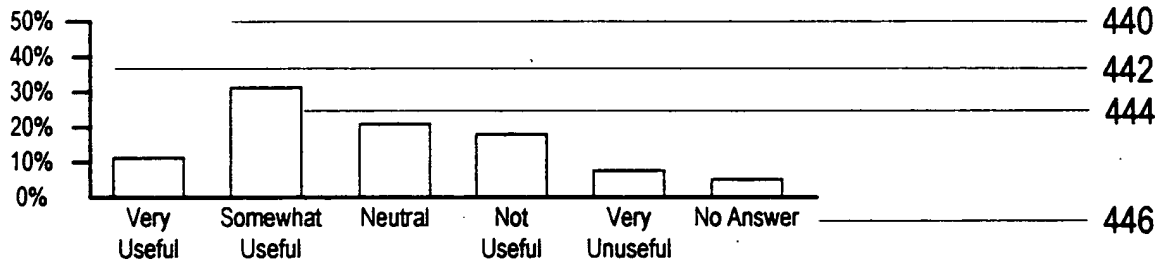
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

## Figure 14

**Probe #12: Function to calculate Net Present Value** \_\_\_\_\_ 430

How useful did you find this method of performing this type of calculation? \_\_\_\_\_ 432

Very Useful	12%	423	_____ 434
Somewhat Useful	31%	1,086	_____ 436
Neutral	25%	884	_____ 438
Not Useful	18%	642	_____ 438
Very Unuseful	8%	287	
No Answer	5%	191	



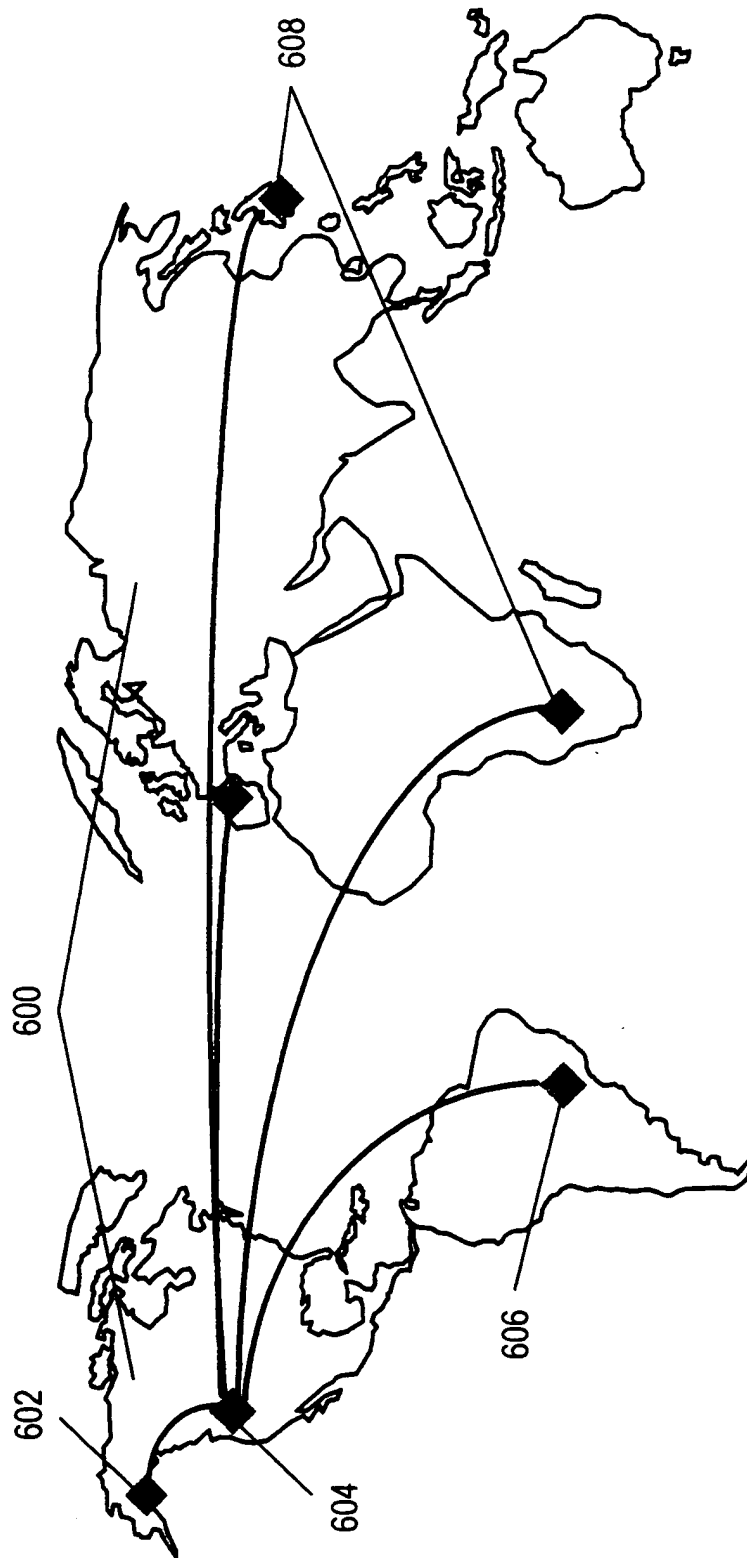
**Customer comments:** \_\_\_\_\_ 448

Please explain how this calculation method helped or hindered your work: \_\_\_\_\_ 450

- |           |  |           |
|-----------|--|-----------|
| 1         | Gives a good understanding of the interaction between different financial measures                           | _____ 452 |
| 1         | I could experiment with the variables  |           |
| 2         | This is easy to understand   |           |
| 2         | Gave me a better understanding of the numbers  |           |
| 2         | It focused on the key elements so I could think about the sensitivity points                                 |           |
| 3         | Somehow the method and my numbers were not related. Although I spent time on it, it didn't help my decision. |           |
| 3         | Too easy to miss the big picture because of data overload. Too many numbers to manipulate.                   |           |
| 4         | There seemed to be more than was necessary.  |           |
| 4         | Should be more instructive   |           |
| 5         | Help!  |           |
| No Answer | Can see consequences of different assumptions  | _____ 454 |
| No Answer | Helped understanding but took too many tries   |           |

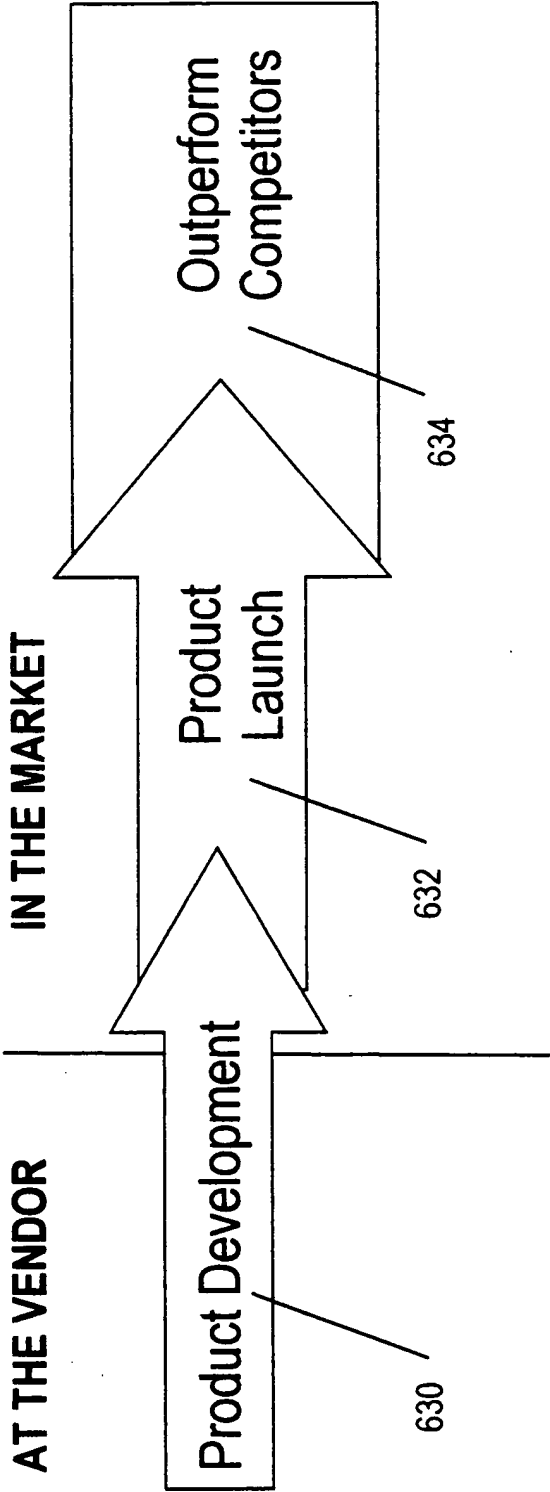
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 15

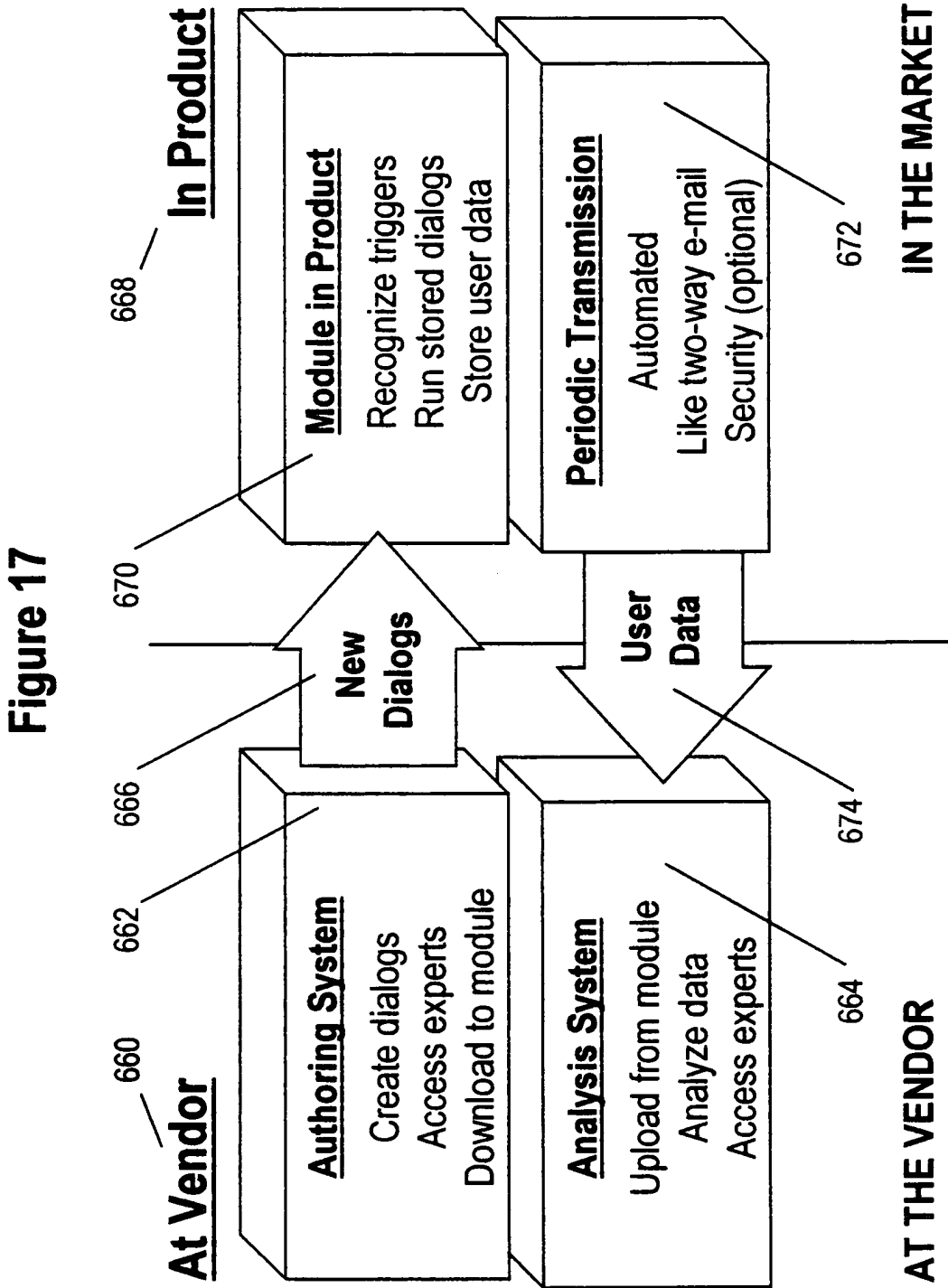


APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 16

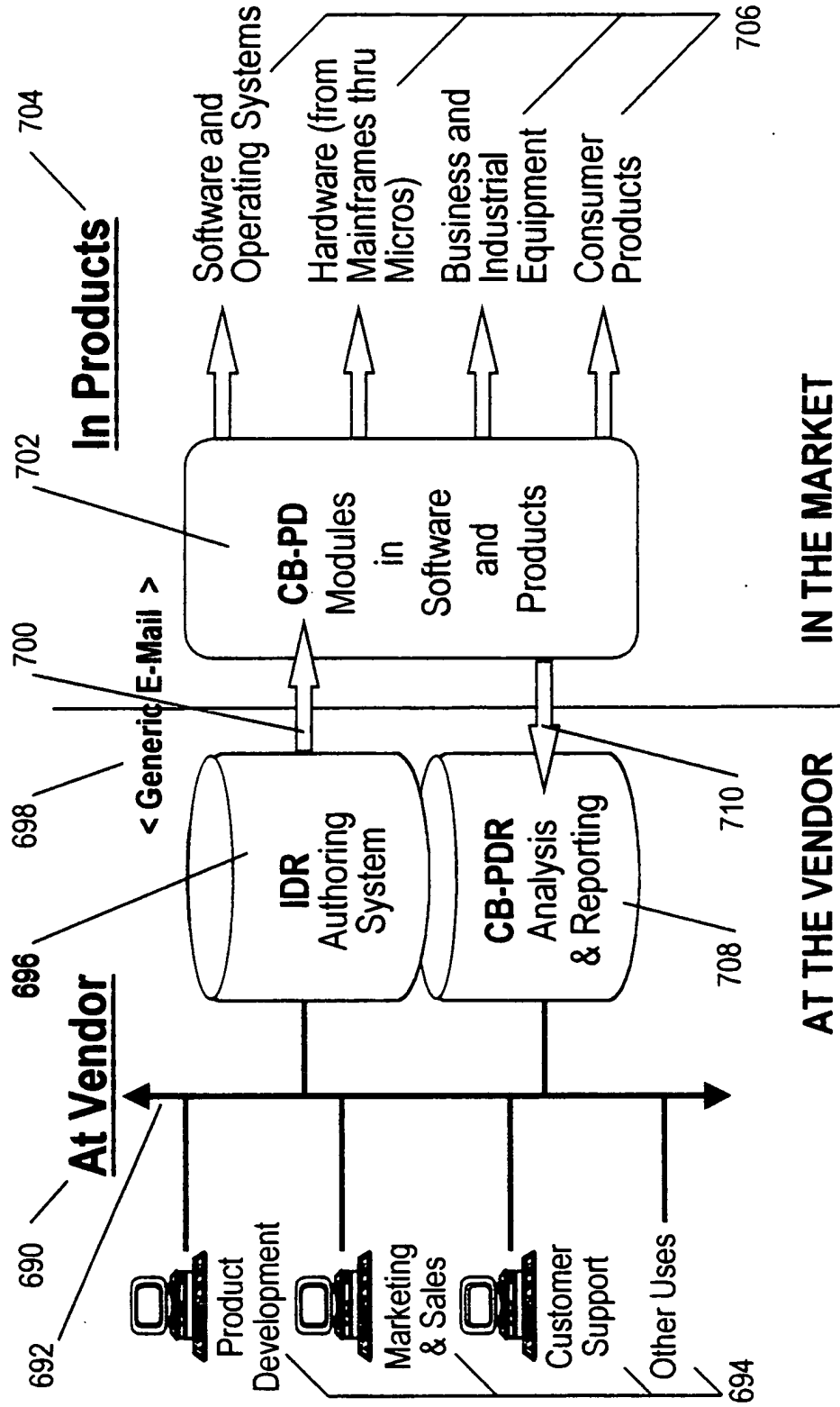


APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		



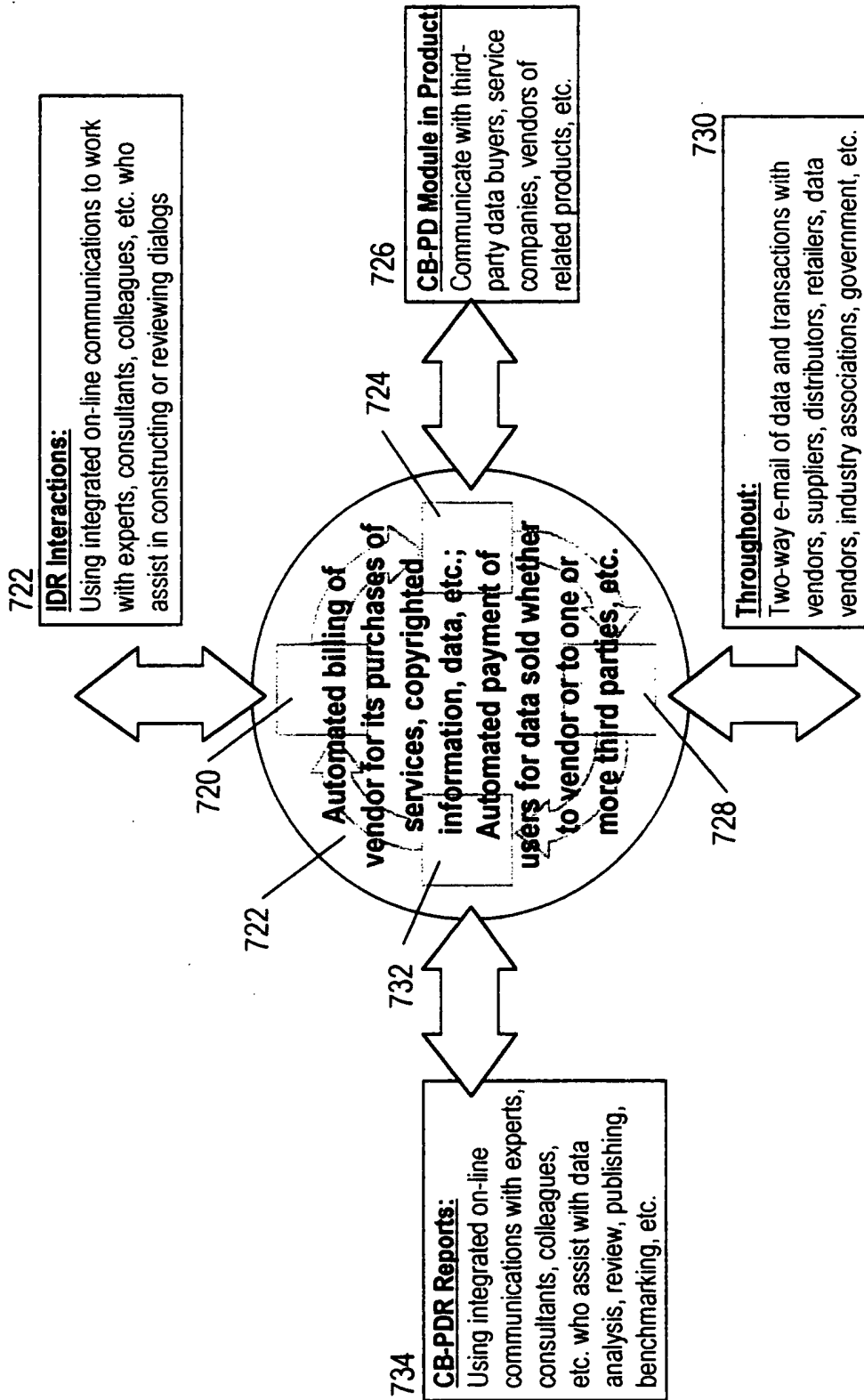
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 18**



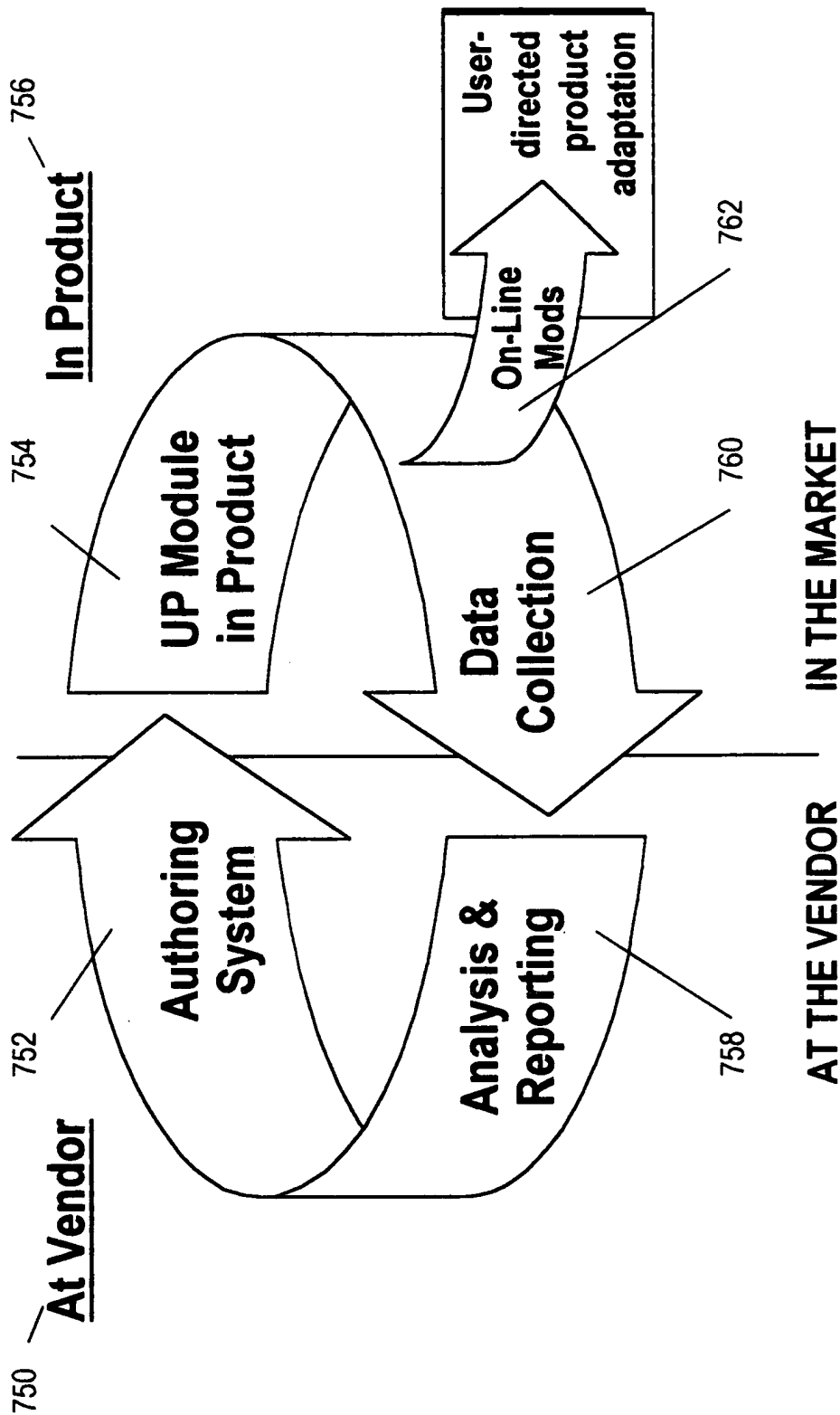


**Figure 19**



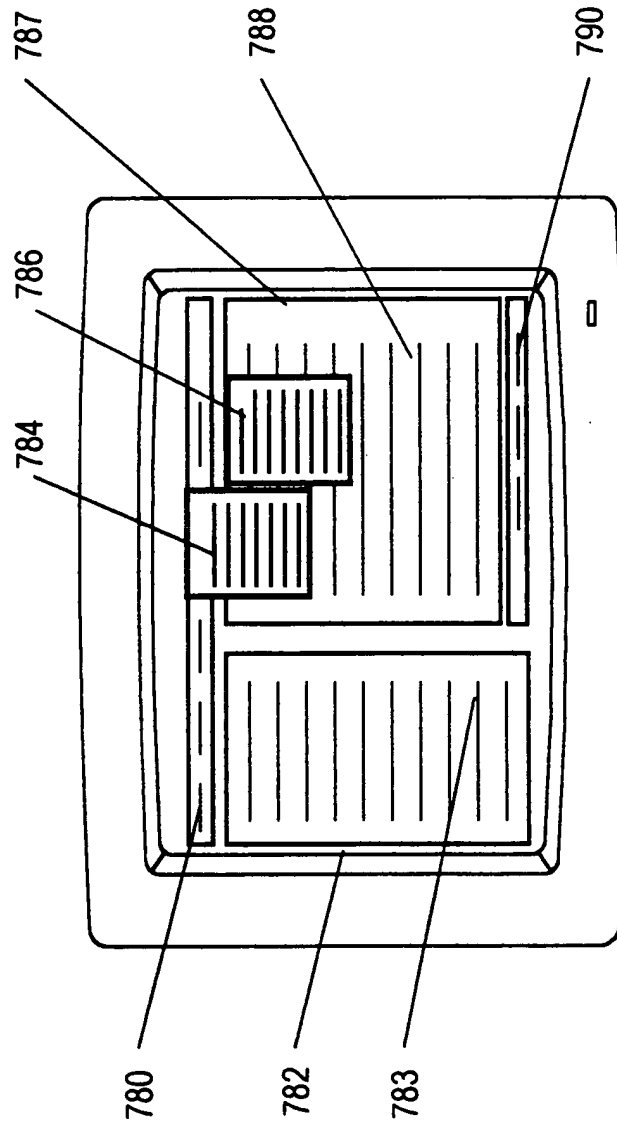
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 20**



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

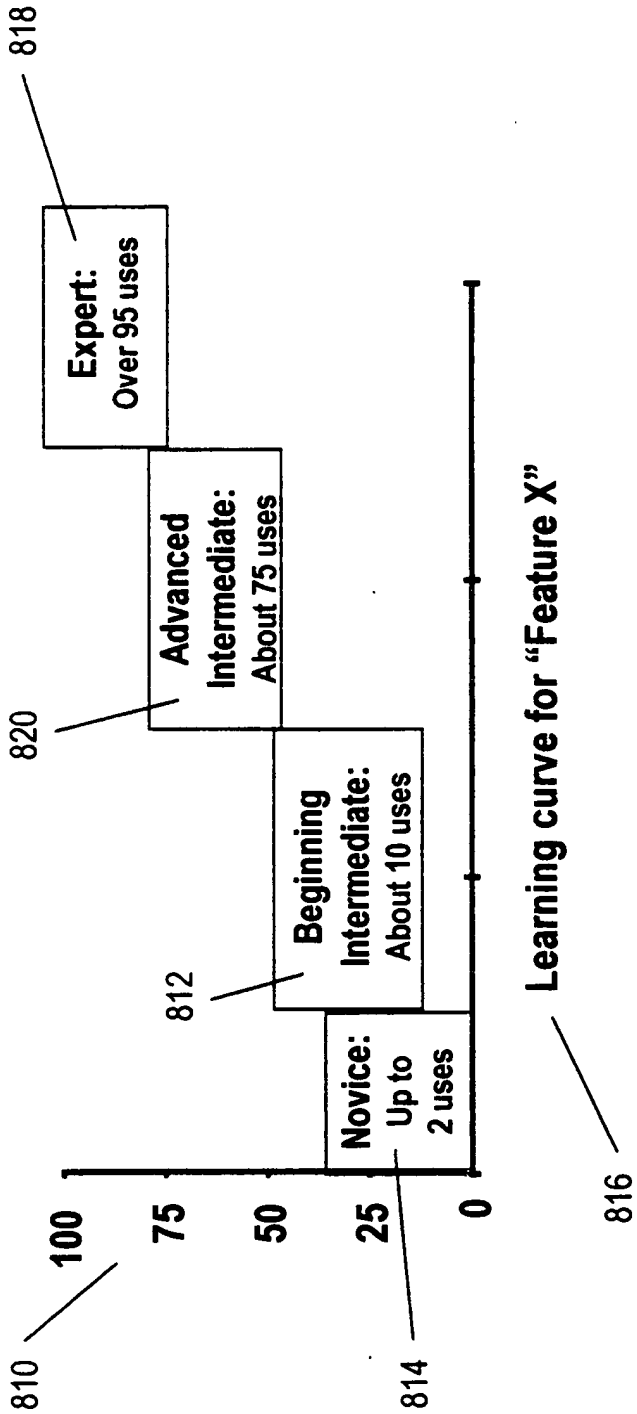
**Figure 21**



**AT THE VENDOR**

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 22



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 23**

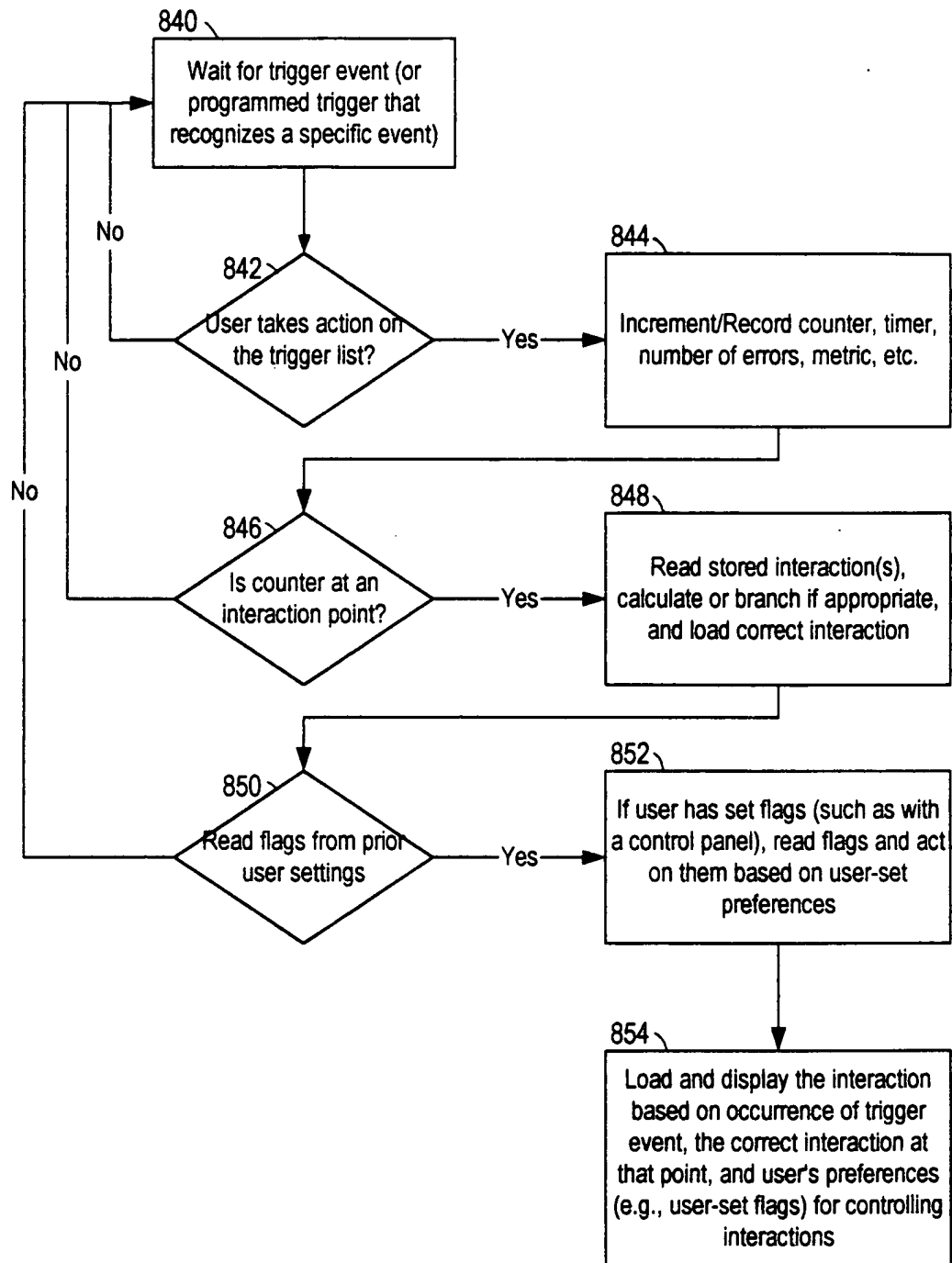


Figure 24

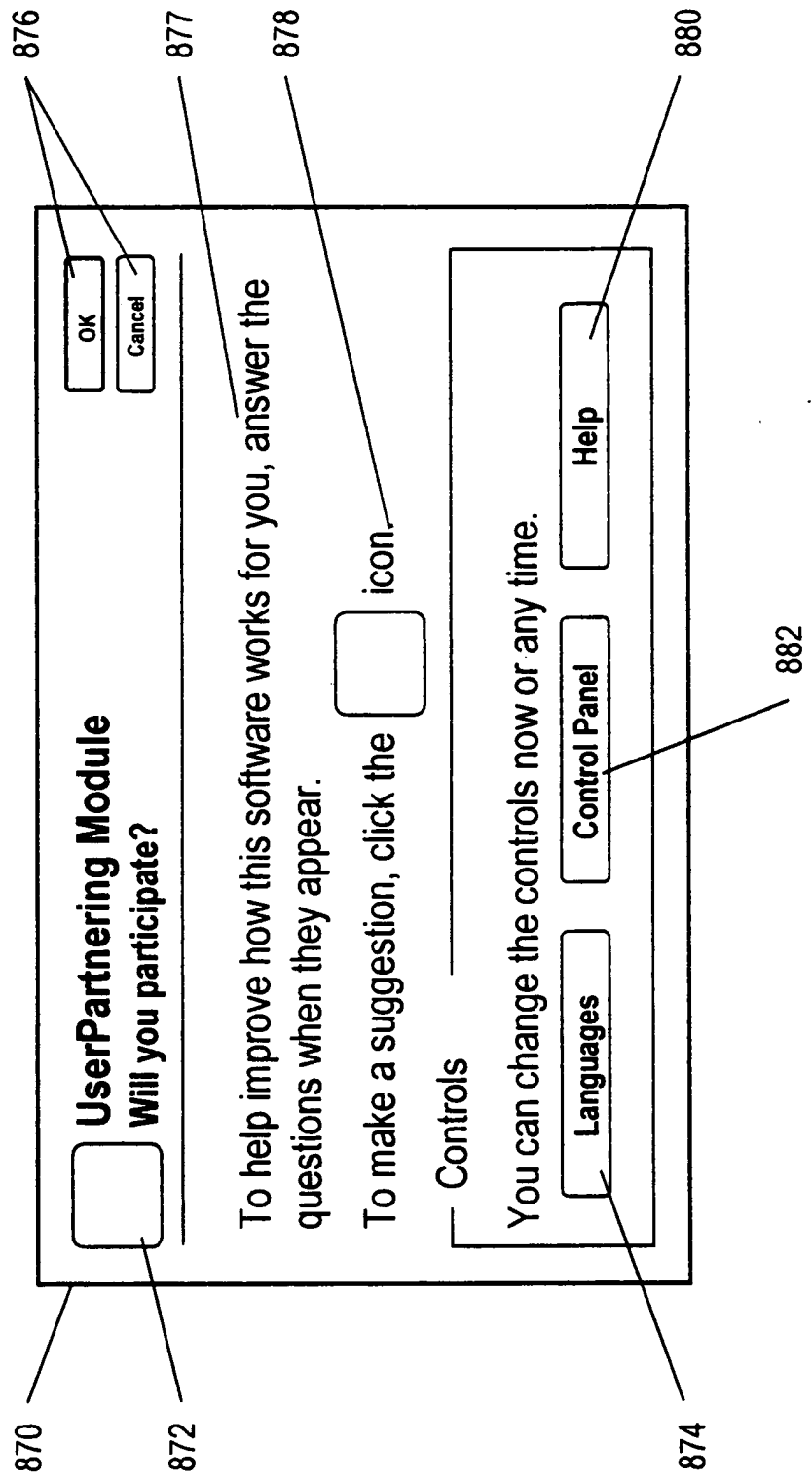
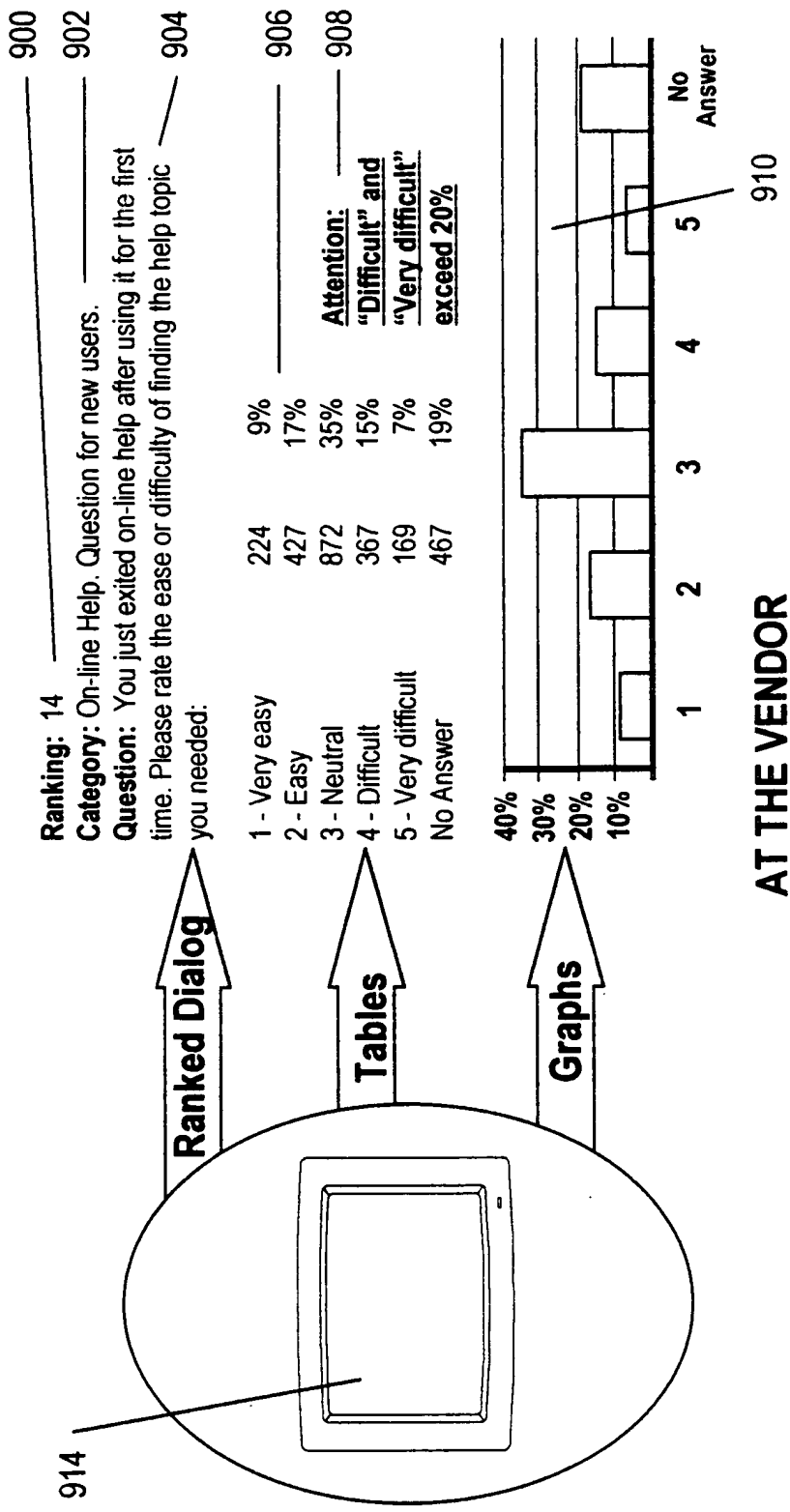
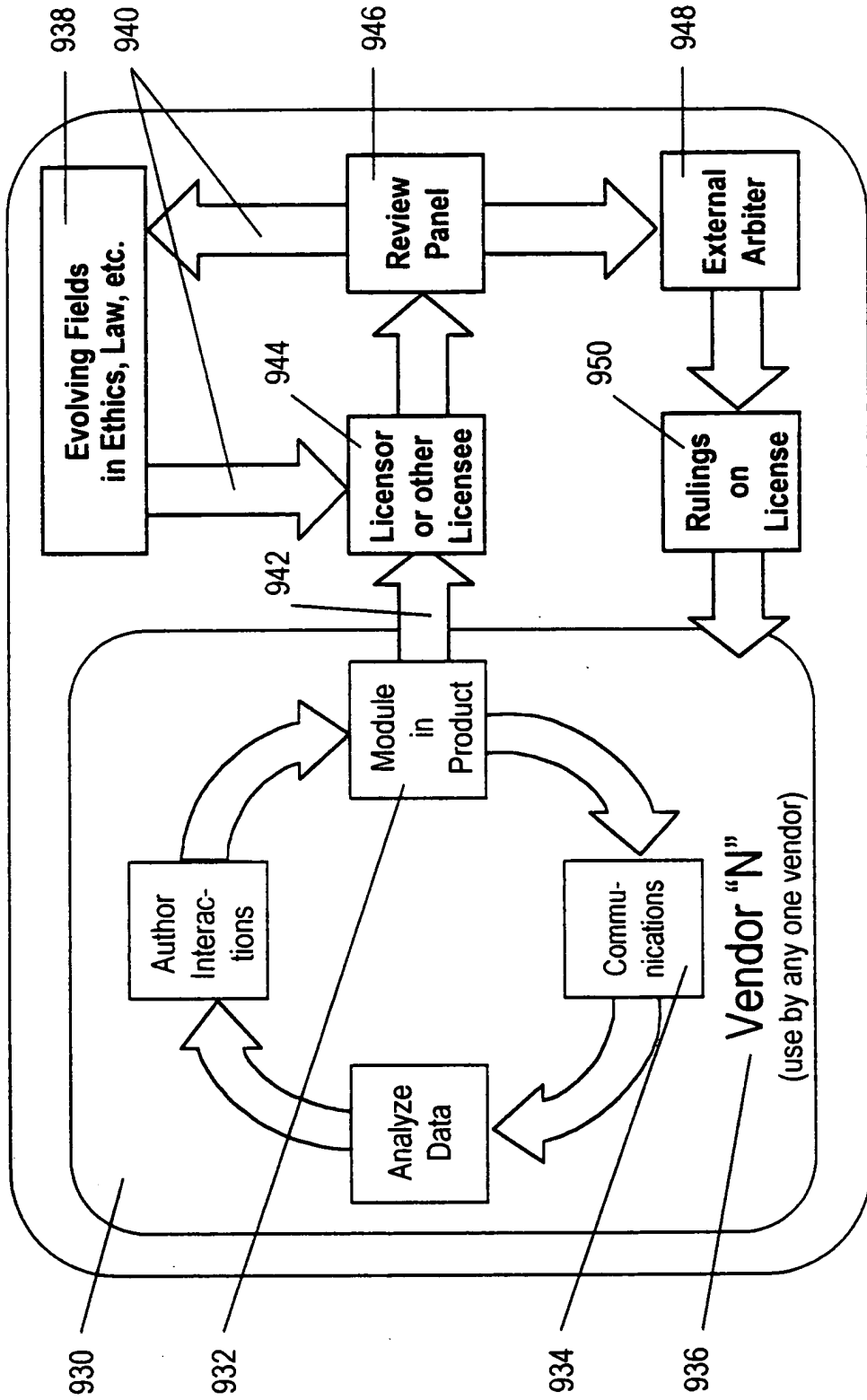


Figure 25



**Figure 26**

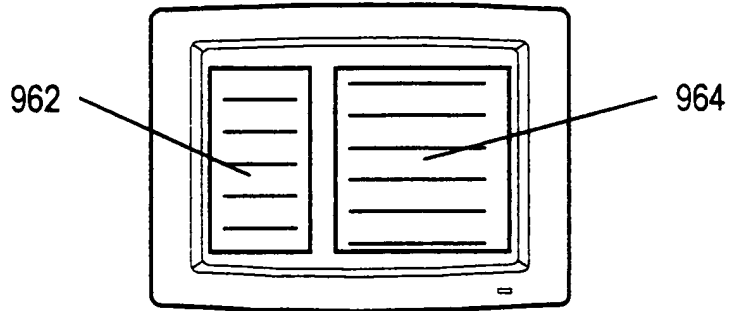




APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 27A**

Authoring System 960 **AT THE VENDOR**



UP Module 966 **IN THE MARKET**

A screenshot of a software dialog box labeled 966. The title bar reads "Undo - Workflow Routing" and "Question 1 of 1". In the top right corner are "OK" and "Cancel" buttons. The main area contains the text: "You just used Undo. How sure are you of what to do at this point? What would help make this clearer?". Below this text is a horizontal progress bar labeled 970. Above the progress bar are five radio buttons, with the first one selected. The labels "Very sure" and "Very unsure" are positioned above the first and last radio buttons respectively. At the bottom center is a button labeled "Control Panel" with the reference number 972 below it.

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

## Figure 27B

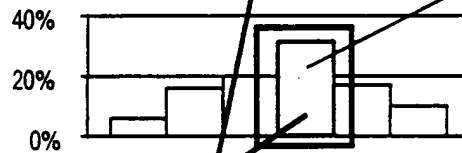
### Analysis System

### AT THE VENDOR

**Category:** UI accessibility.

**Question:** You just used Undo. How sure are you of what to do?

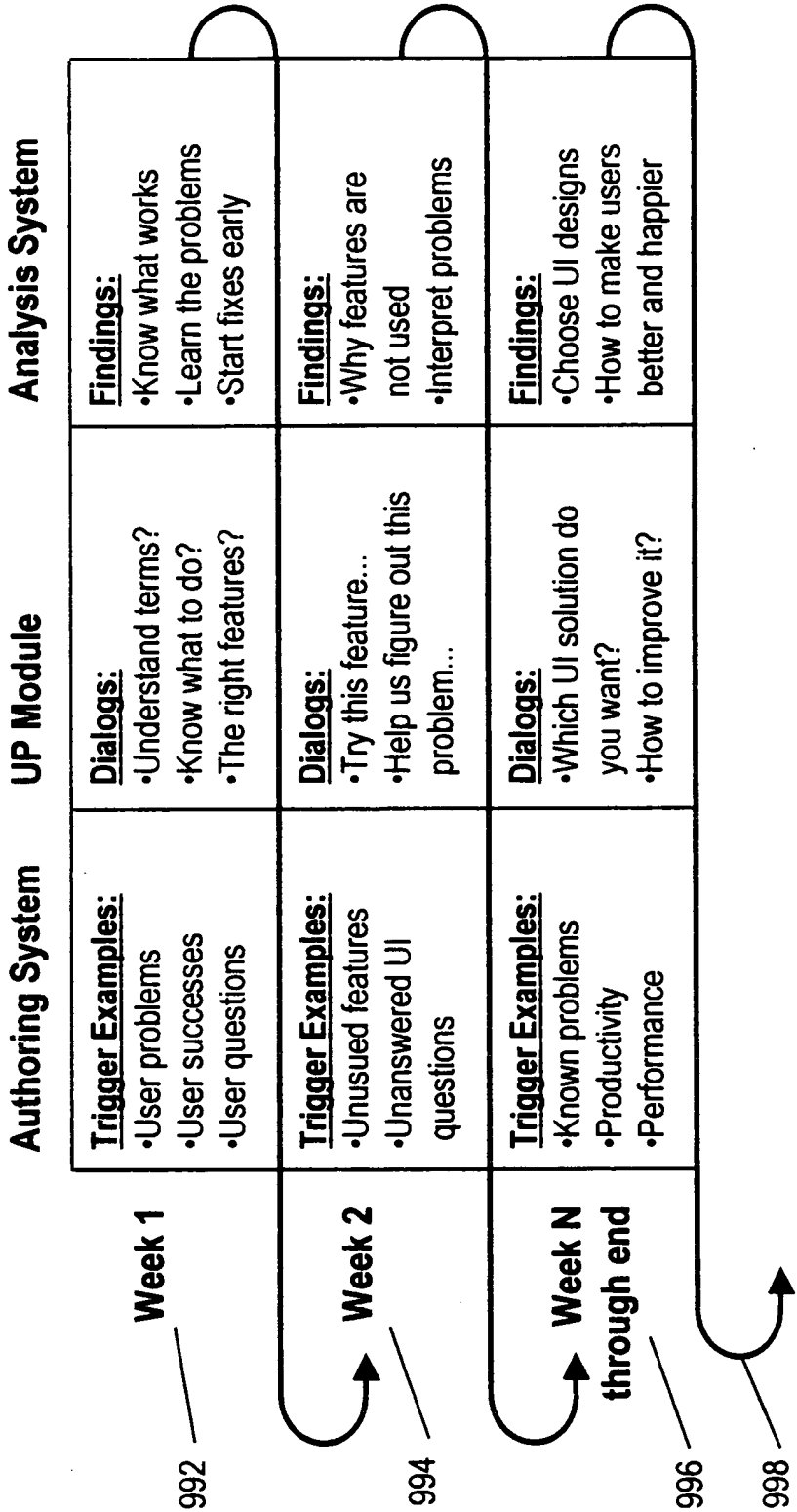
1 - Very sure	18	6%
2 - Sure	44	16%
3 - Neutral	55	20%
4 - Not sure	86	31%
5 - Very unsure	44	5%
No Answer	29	10%



#### **Suggestions for "Not Sure":**

- 4 - Where does "routing" send this?
- 4 - How can I find out who works on this next?
- 4 - Help!
- 4 - Show me a map of who gets this and when.

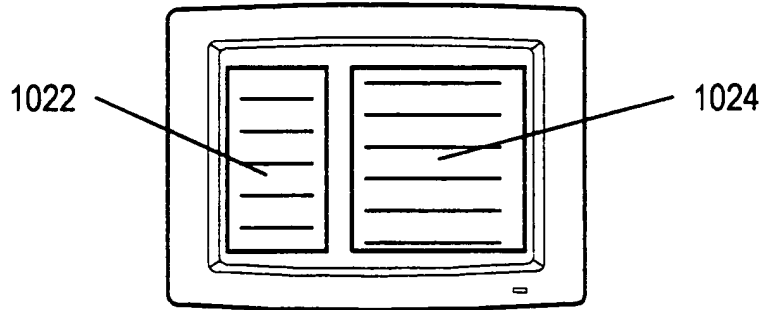
Figure 28



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 29A**

Authoring System 1020 **AT THE VENDOR**



UP Module 1026 **IN THE MARKET**

A screenshot of a software dialog box labeled 1028. The title bar reads "Learning Your Needs Question 3 of 6". In the top right corner are "OK" and "Cancel" buttons. The main area contains the question "Where did you see the ad(s) that led you to buy this product?" followed by a list of radio button options: "Byte", "Computer Language", "Datamation", "CASE Trends", "PC Week", and "PC Computing". At the bottom center is a button labeled "Control Panel", which is pointed to by the label 1030.

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

# Figure 29B

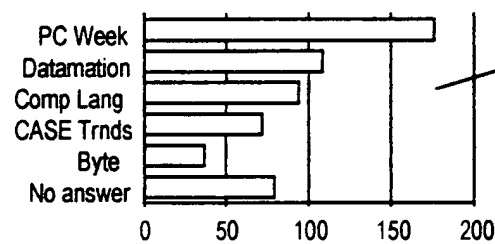
## Analysis System

AT THE VENDOR

**Category:** Customers who bought and installed the product within one week.

**Question:** Which media worked during the first week of sales?

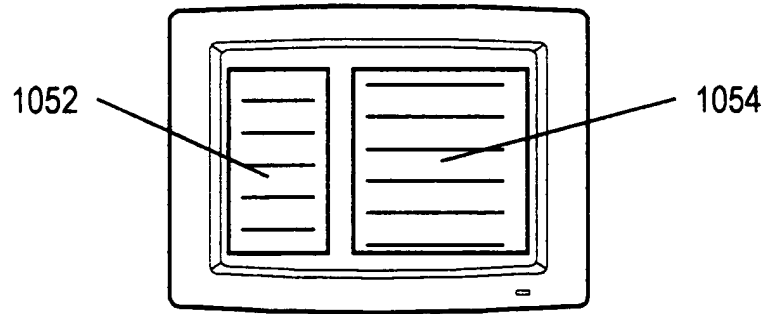
1 - PC Week	176	31%
2 - Datamation	108	19%
3 - Computer Language	94	17%
4 - CASE Trends	72	13%
5 - Byte	37	7%
No answer	79	



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 30A**

Authoring System 1050 **AT THE VENDOR**



UP Module 1056 **IN THE MARKET**

☐ **Workflow Routing**  
**Customer Support Solution 1 of 3**

OK

Cancel

1. Display the "Employee Map" that shows users.
2. To route your document to the proper users, drag and drop it on them in the proper order.

How would you make this clearer in the future?

Display this solution again?    ☐ Yes    ☒ No

Next Solution

Control Panel

1062

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 30B**

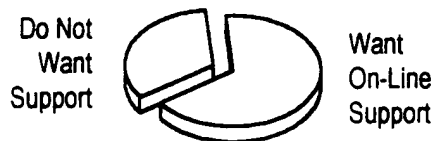
**Analysis System**

1064

**AT THE VENDOR**

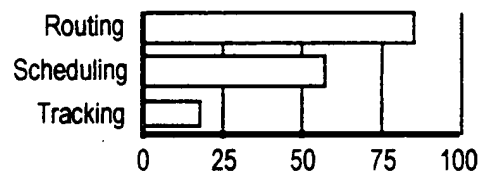
**Category:** User needs.

**Question:** Percent who want Customer Support delivered through the product.



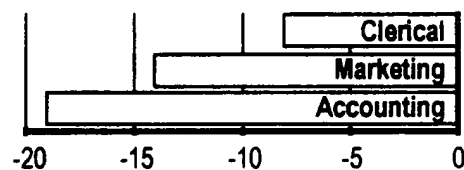
**Category:** Use of on-line Support.

**Question:** Percent who use on-line Customer Support, ranked by feature.



**Category:** Impact on performance.

**Question:** Change in error rates among users of on-line Support.

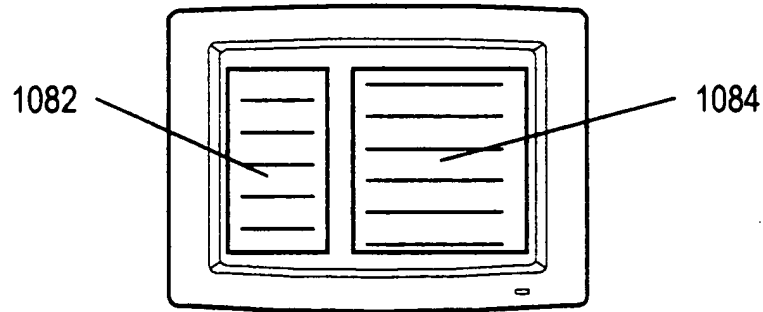


1066

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 31A**

Authoring System 1080 **AT THE VENDOR**



UP Module 1086 **IN THE MARKET**

A screenshot of a software dialog box labeled 1086. The dialog box has a title bar with a checkbox and the text "To Repair This Immediately Offer 1 of 1". Below the title bar, there is a line of text: "We will start fixing this problem within four hours if you buy an on-site service contract at this time." followed by a question: "Would you like right now: (1) the price and terms of a service contract, (2) a way to buy this through your computer, and (3) an immediate service call?". Below the question are two radio buttons labeled "Yes" and "No". At the bottom of the dialog box is a button labeled "Control Panel". In the top right corner of the dialog box are two buttons labeled "OK" and "Cancel".



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

## Figure 31B

### Analysis System

1092

AT THE VENDOR

***Routed by E-mail to the Service Dept.:***

1094

**Category: URGENT repair needed**

**Service Contract Purchased:** A customer just bought a service contract when a problem occurred. AN IMMEDIATE PHONE CALL AND SERVICE CALL ARE REQUIRED.

1096

**Customer information:**

**Contact:** Barbara Loucks, Manager  
Competitive Advantages, Inc.  
500 New Strategic Way  
Target City, ST 12345, USA  
Telephone: (222) 333-4444  
Fax: (222) 333-5555

1098

**Information:**

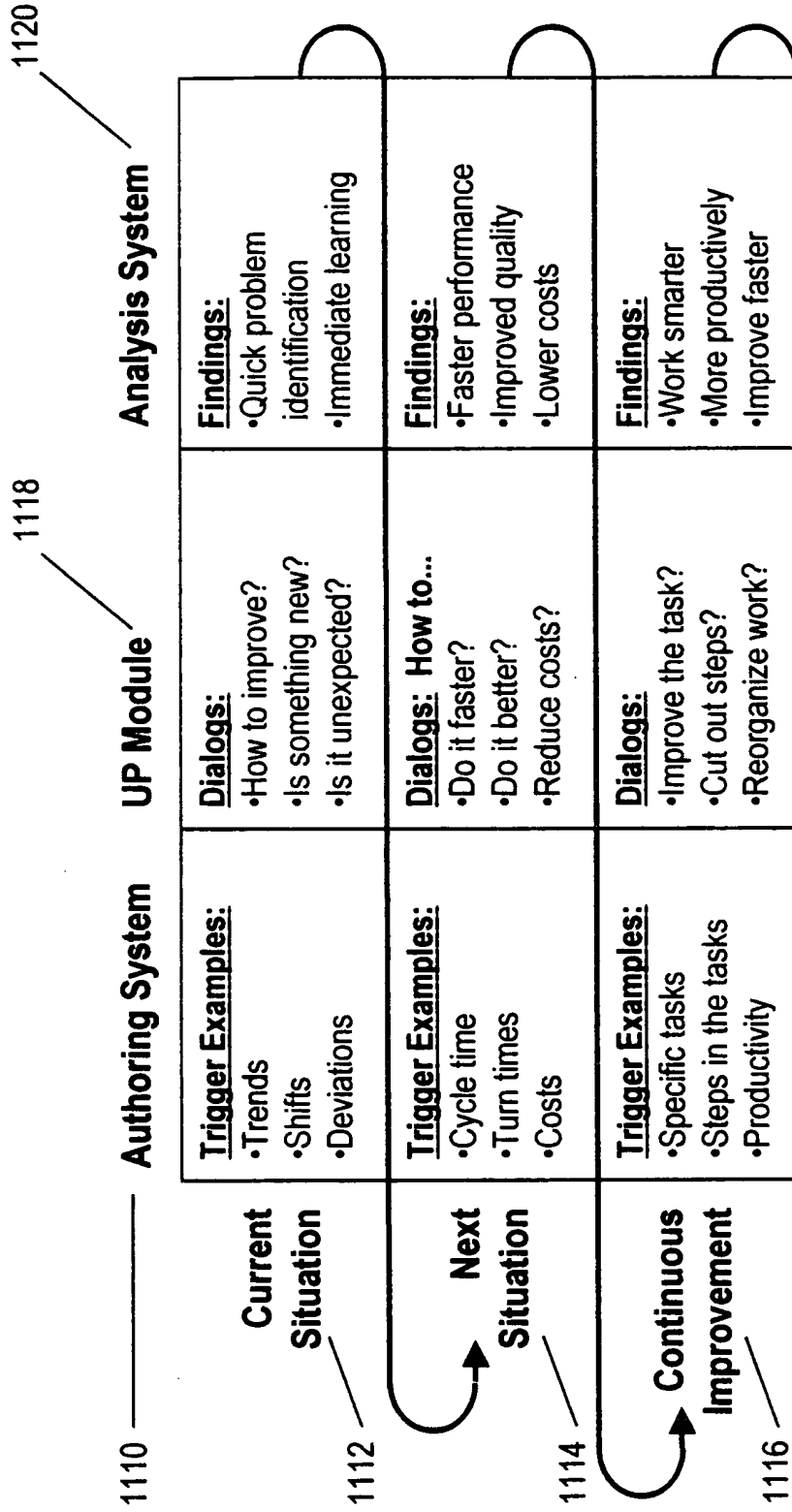
Click here for

- (1) a hardware/software summary,
- (2) an UP Module problem report, and
- (3) user comments.

**Problem Details**

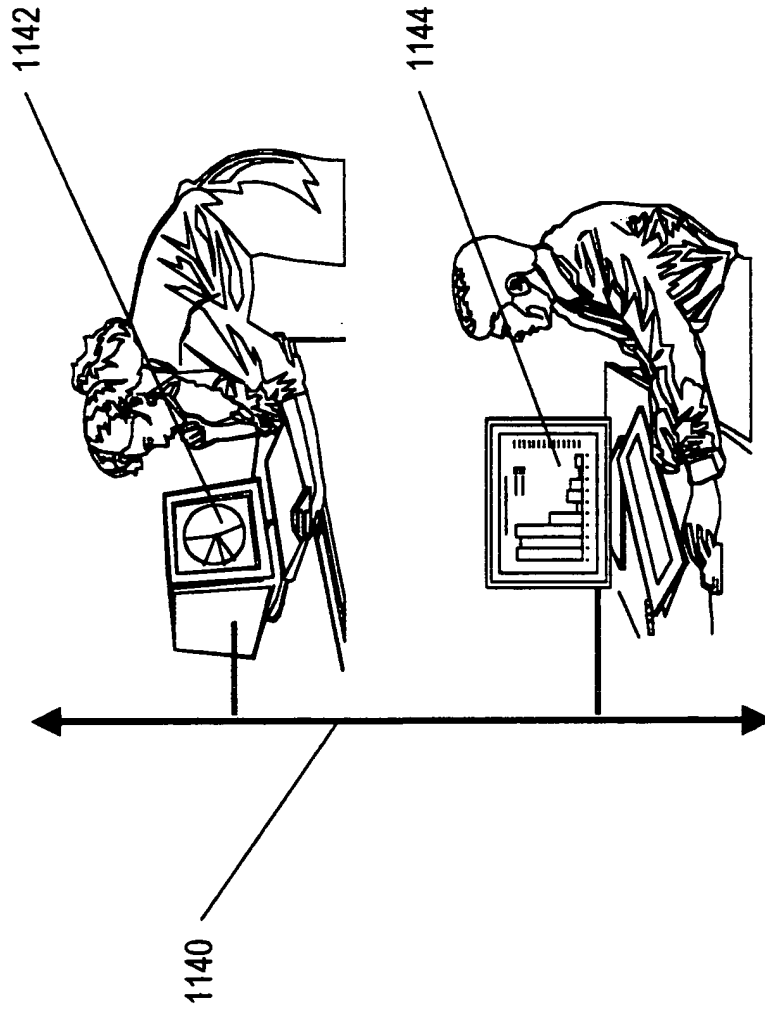
1100

**Figure 32**



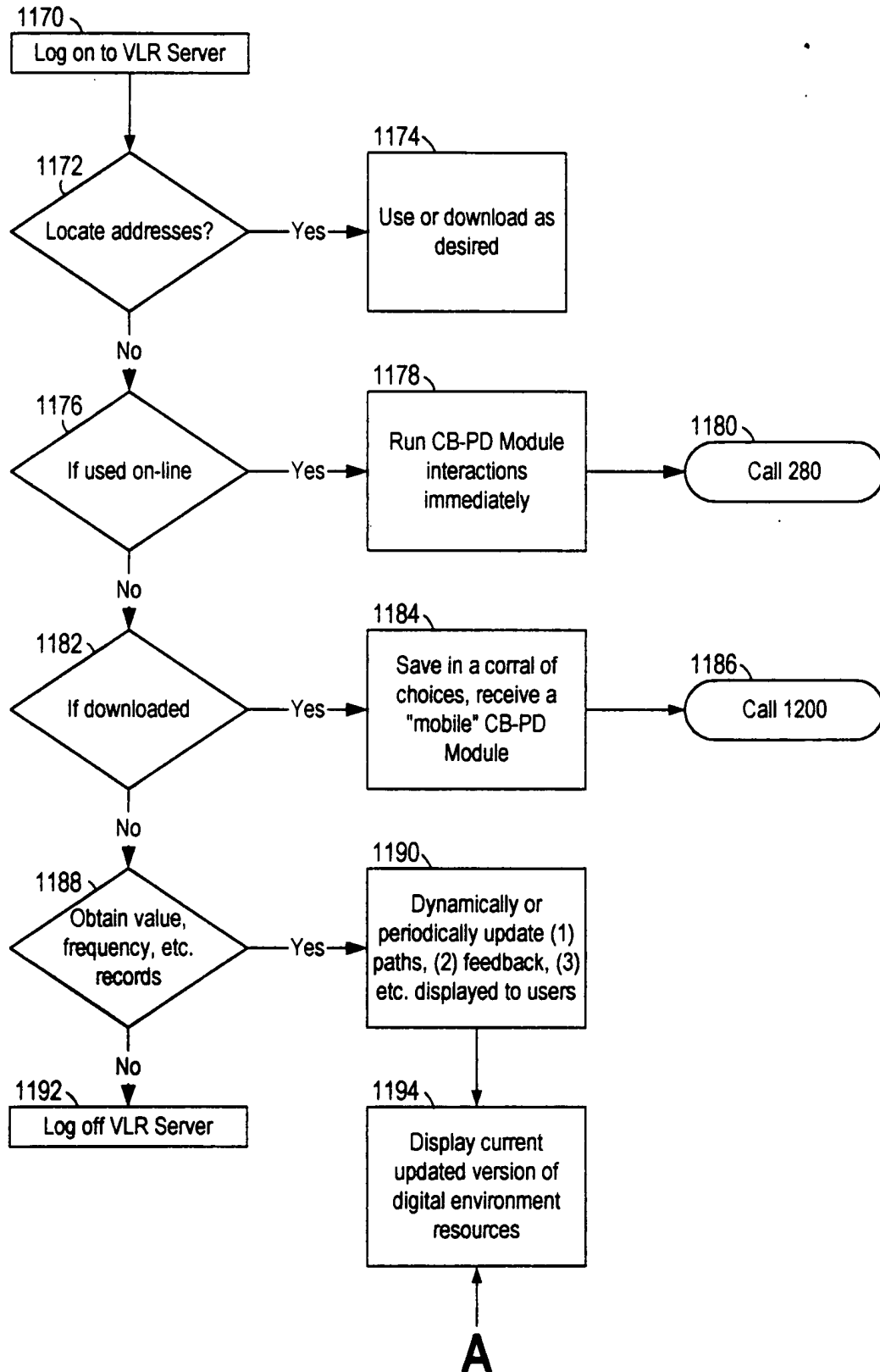
APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 33



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

**Figure 34A**



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Figure 34B

